THE

MOSAIC Syſtem

Confirmed by

PHÆNOMENA.

Price Three Shillings.

Advertiſement.

IN this volume, Sanchoniatho's *Memoirs are examined, and proved to agree with the* Moſaic *Hiſtory. Alſo the treaſures of the rain-waters are diſcovered in the firmament; which were poured upon the earth at the ſeaſon of the deluge. The origin of the* Ethiopians *is likewiſe pointed out; and the peopling of* America *by their means is conſidered, with ſome more particulars which ſeemed neceſſary to be taken notice of, in an Examination of the* Moſaic *Syſtem.*

An Essay on the History of the Creation:

Wherein is ſhewn, that

THE

Copernican Philoſophy

Is *Contradicted* by PHÆNOMENA:

And, that

The *Mosaic* Syſtem

Is *Confirmed* from PHÆNOMENA.

Adſit reverentia Vero.

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AN

An ESSAY
on the
History of the Creation.

CHAP. XV.

The History of the Creation of the Heaven, and of the Earth.

FROM the examination of the philosophical history of nature, I come to the consideration of the Revealed System communicated by *Moses*. This will bear the severest scrutiny; and be found to agree in all it's parts with facts

and phænomena: which trial philoſophy proved unable to endure. The truth of what I have ſaid will be manifeſted, by an examination of the Hiſtory delivered by *Moſes*, in the firſt chapter of *Geneſis*.

THE beginning of the chapter is an introduction to the Hiſtory of the Creation, contained in theſe words: "*In the* "*beginning* GOD *created the heaven, and* "*the earth. And the earth was without* "*form, and void; and darkneſs was upon* "*the face of the deep.*" After which introduction the Hiſtory begins: "*And the* "SPIRIT *of* GOD *moved upon the face* "*of the waters.*" The SPIRIT deſcended from the habitation of his glory, to ſurvey "*the face of the waters*" called before "*the Deep;*" which is the *chaos* of the ancients. This deſcent was for the purpoſe of the Creation. At his word, the darkneſs removed from his preſence: and the firſt act of his power was the creation of *light*. "GOD *ſaid, Let there* "*be light, and there was light. And* GOD

"*ſaw*

"saw the light that it was good: and "GOD *divided the light from the dark-* "*neſs. And* GOD *called the light Day,* "*and the darkneſs he called Night. And* "*the evening and the morning were the* "*firſt day.*" The darkneſs was not annihilated upon the creation of light; but was ſhut up within a limited ſpace, and intirely ſeparated from the newly created light: "GOD *divided the light from the* "*darkneſs.*"

ON the ſecond day, GOD created a *firmament*; which ſuſpended the exteriour waters of the deep, and divided them from the interiour waters next to the center of the chaos. Theſe lower waters remained for the preſent in their chaotic ſtate. "GOD *ſaid, Let there be a firma-* "*ment in the midſt of the waters: and let* "*it divide the waters from the waters.* "*And* GOD *made the firmament: and di-* "*vided the waters which were under the* "*firmament from the waters which were* "*above the firmament: and it was ſo. And*

"GOD *called the firmament Heaven. And* "*the evening and the morning were the ſe-* "*cond day.*" Proper remarks, it is hoped, will be made on the ſeveral quotations from the Hiſtory, after the relation of each day's work.

ON the third day, the interiour waters which were beneath the firmament were alſo ſeparated from the deep or chaos, making a collective body of waters below, as the former waters were collected together in the upper regions: which lower waters were now called *Seas*. And from thence the dry land was produced, and called *Earth*. "*And* GOD "*ſaid, Let the waters under the heaven,* "(or firmament,) *be gathered together un-* "*to one place; and let the dry land appear:* "*and it was ſo. And* GOD *called the dry* "*land Earth; and the gathering together* "*of the waters called he Seas. And* GOD "*ſaw that it was good.*"

ON the fourth day, GOD having before clothed and adorned the earth as

he

he ſaw good, ſet *lights* in the firmament of heaven; that the earth might have a proper portion of light, as the heavens had been already filled with it, when GOD divided between the light and the darkneſs. Nor was this their only uſe to the future inhabitants of the earth; who might alſo learn from them the *ſigns*, and ſeaſons, when they might, with the greateſt proſpect of ſucceſs, go about the various labours which they were to take under the ſun. " *And* GOD *ſaid, Let there* " *be lights in the firmament of the heaven,* " *to* divide the day from the night: *and* " *let them be for ſigns, and for ſeaſons,* " *and for days, and years. And let them* " *be for lights, in the firmament of the* " *heaven, to give light upon the earth: and* " *it was ſo. And* GOD *made* two great " lights; *the greater light to rule the day,* " *and the leſſer light to rule the night:* " *He made the ſtars alſo. And* GOD *ſet* " *them* in the firmament of the heaven " to give light upon the earth: *and to*

" *rule*

"*rule over the day, and over the night;*
"*and to divide the light from the dark-*
"*neſs. And* GOD *ſaw that it was good.*
"*And the evening and the morning were*
"*the fourth day.*" The reſt of the Hiſtory is poſtponed.

CHAP. XVI.

On the Deep or Chaos; which was prior to the Creation.

WHEN we ſet out upon principles of truth, all the parts of a ſubject tend to confirm each other; and the light increaſes as we proceed, till we come to the manifeſtation of that which we are ſeeking after. A particular examination and diſcuſſion of the preceding parts of the Hiſtory of the Creation will, I truſt, give this token of the truth.

THE

THE introduction to the History claims the first part of our attention: "*In the beginning*, GOD *created the heaven and the earth. And the earth was* (before the Creation) *without form, and void: and darkness was upon the face of the deep.*" It is plain, that these words do not begin the work of the Creation. For the earth could not be *without form*, after it had been fashioned by the wisdom and power of the CREATOR. Nor could *Moses* say, "GOD *created the heaven and the earth*; and after this creation, the earth was *tohu* and *bohu*; a *chaos*, and a *confusion*. For so the words in this place translated *without form and void*, are rendered in Dr. Cudworth's *Intellectual system*, p. 79. "*All is* tohu *and* bohu, chaos *and* confusion." Dr. *Hammond* likewise puts the same construction upon the words, in his paraphrase on the third verse of the eleventh chapter to the *Hebrews*: — "*the earth which is described as an invisible chaos*

"*of*

" *of confuſion, Gen.* i. 2. " In the twentyfourth chapter and tenth verſe of the prophet *Iſaiah*, the tranſlators of the Bible have engliſhed the word *tohu* confuſion: " *The city of confuſion* (tohu) *is* " *broken down.* " And in the eleventh verſe of the thirtyfourth chapter, *tohu* is rendered confuſion, and *bohu* is tranſlated emptineſs: " *But the cormorant and* " *the bittern ſhall poſſeſs it; the owl alſo,* " *and the raven ſhall dwell in it. And he* " *ſhall ſtretch upon it the line of confuſi-* " *on, and the ſtones of emptineſs.* " And it is hereby evidently meant, that the LORD would reduce that city to an heap of confuſion, that he would reduce it " *without form and void.* " From hence it is very apparent, that *Moſes* introduces the Hiſtory of the Creation, with a deſcription of the confuſion of the elements, before they were ordered and faſhioned by the DIVINE SPIRIT; when the principles of the world were mixed and ſcatterred in the chaos, where-

in

in the earth and all the parts of the universe lay *invisible, and without form*; without figure, unmade.

FOR according to the septuagint version the signification of *tohu* and *bohu* is *non aspectabilis*, et *infabricata:* earth *was not to be seen*, before the Creation, and it *was unfashioned* when "*the* SPIRIT of GOD "*moved upon the face of the waters.*" Which description seems to have been in the mind of the Apostle to the *Hebrews*, when he delivers the following words in the eleventh chapter, and third verse of his epistle: "*Through faith, we* "*understand that the worlds were framed* "*by the word of* GOD; *so that things* "*which are seen were not made of things* "*which do appear.*" The multitude of "*things which are seen were made of things* "*which did not appear*:" neither could they wear an appearance; being destitute of form, and figure, and light; and therefore wanting every quality to denominate them visible objects.

PERHAPS the tranſlators broke the compoſition of the *Greek* word which ſignifies not appearing, from a ſuperabundant caution, leſt advantage ſhould be given to *Epicureans*, and other atheiſts; by allowing, with them, a preexiſtence of atoms. But truth deſires not to be kept from the light; and religion fears not, where no fear is. Although *Lucretius* and others have abuſed the atomical philoſophy; Dr. *Cudworth* thinks that this was the ancient teaching, before we hear of atheiſts; and that it is a weapon which may be ſucceſsfully uſed againſt them. "*We are of opinion that* "*neither* Democritus, *nor* Protagoras, *nor* "Leucippus *was the firſt inventor of this* "*philoſophy: and our reaſon is, becauſe they* "*were all three of them atheiſts*; (*though* "Protagoras *alone was baniſhed for that* "*crime by the* Athenians,) *and we cannot* "*think that any atheiſts could be the in-* "*ventors of it*; *much leſs that it was the* "*genuine ſpawn and brood of atheiſm it* "*ſelf*,

" *ſelf as ſome conceit: becauſe however theſe* " *atheiſts adopted it to themſelves, endeavour-* " *ing to ſerve their turns of it; yet if right-* " *ly underſtood* it is the moſt effectual en- " gine againſt atheiſm that can be." *Intellectual ſyſtem.* p. 12. In the ſame page, that very learned writer informs us further of the antiquity of the atomical philoſophy. " *But beſides reaſon, we have alſo* " *good hiſtorical probability for this opinion,* " *that this philoſophy was a thing of much* " *greater antiquity than either* Democritus " *or* Leucippus. — Poſidonius *an ancient* " *and learned philoſopher did (as both* " Empiricus *and* Strabo *tell us) avouch* " *it for an old tradition, that the firſt in-* " *ventor of this atomical philoſophy was one* " Moſchus *a* Phœnician, *who as* Stra- " bo *alſo notes, lived before the* Trojan " *wars.*"

IF we underſtand by the chaos of the ancients, a confuſed mixture of the principles or atoms, which, when collected and diſpoſed by infinite wiſdom and

power, appeared in the form and beauty of the Created Syſtem; then it may be proved, that the atomical philoſophy was taught in *Phœnicia*, near the time of the *deluge*; inſtead of being inſtituted there about the time of the *Trojan* wars. This is manifeſt from *Sanchoniatho*'s *Phœnician* Hiſtory, which I promiſed, in my firſt volume, to examine. The hiſtory was communicated by *Thoth*, who was the grandſon of *Ham* the ſon of *Noah*; as will be ſhewn, in due time and order, in this Eſſay: and is tranſlated from *Euſebius* by Biſhop *Cumberland*, beginning as follows: "*He* (Sanchoniatho) "*ſuppoſeth, or affirms, that the principle of* "*the univerſe was a dark and windy air,* "*or a wind made of dark air, and a turbu-* "*lent evening chaos: and that thoſe things* "*were boundleſs, and for a long time had* "*no bound or figure.*" In this tradition, agreeably to what *Moſes* delivered concerning the preexiſtence of atoms, the earth (and the univerſe) was inviſible

and

and had *no bound or figure*, until it was formed by the hand of the CREATOR. Before the Creation all was *darkneſs* and *deep*, in the language of *Moſes*; which the *Phœnician* deſcribes, as "*a wind made* "*of dark air, and a turbulent evening cha-* "*os.*" So there is a perfect agreement between *Moſes* and *Sanchoniatho*, in reſpect of the chaotic ſtate of the world.

NOR was it only a tradition in *Phœnicia*, that the world was made from a dark chaos; but the ſame was the general opinion, as Dr. *Cudworth* aſſerts, p. 248: "*It was a moſt ancient, and in a* "*manner univerſally received tradition among* "*the pagans, as hath been often intimated,* "*that the coſmogonia, or generation of the* "*world, took it's firſt beginning from a cha-* "*os: the divine coſmogoniſts agreeing here-* "*in with the atheiſtic ones: this tradition* "*having been delivered down from* Orpheus "*and* Linus, *amongſt the* Greeks, *by* He- "ſiod *and* Homer, *and others; acknow-* "*ledged by* Epicharmus, *and embraced by*

"Thales,

" Thales, Anaxagoras, Plato, *and other*
" *philoſophers, who were theiſts.* — *Neither*
" *can it reaſonably be doubted, but that it*
" *was originally* Moſaical; *and indeed at*
" *firſt a Divine revelation: ſince no man*
" *could otherwiſe pretend to know what was*
" *done before mankind had any being. Where-*
" *fore thoſe pagan coſmogoniſts, who were*
" *theiſts, being polytheiſts, and theogoniſts al-*
" *ſo, and aſſerting, beſides the one ſupreme*
" *unmade* DEITY, *other inferiour mun-*
" *dane gods, genereted together with the*
" *world; the chief whereof were the ani-*
" *mated ſtars; they muſt needs, according*
" *to the tenour of that tradition, ſuppoſe*
" *them, as to their corpereal parts at leaſt,*
" *to have been juniors to night and chaos,*
" *and the offſpring of them*: becauſe they
" were all made out of an antecedent
" dark chaos."

CHAP.

CHAP. XVII.

On the creation of Light by the SPIRIT.

THE firſt thing that was done towards the Creation, is expreſſed in theſe words: "*And the* SPIRIT *of* "GOD *moved upon the face of the wa-* "*ters.*" What is here termed *waters*, is plainly the *deep* in the former part of the verſe. And the vaſt quantity of water always exiſting every where, warrant the element of water to be put for the whole chaos: eſpecially conſidering it's great and extenſive uſes in compoſitions, and ſolutions alſo; whence naturally ariſe prodigious effects of this principle in the Creation. And many beſides *Moſes* have ſpoken of the element of water as the principle of all things. "*Af-* "*ter* Moſes *had ſaid that the* SPIRIT "*of* GOD *brooded upon the waters, in the* "*firſt*

"*firſt creation of all things*; *the ancient* "Phœnicians, *made water the principle of* "*all things. The ſame doctrine was after-* "*wards adopted by the* Egyptians; *and* "*from them* Thales *brought it into* Greece; "*from whence it ſpread among the che-* "*miſts.*" *Boerhaave's* Chemiſtry. vol. 1. p. 447.

WHILST the world was nothing but a dark chaos, "*the* SPIRIT *of* GOD "*moved upon*," or ſurveyed "*the face* "*of the waters*," or the abyſs; deſigning to form it into a world. Upon the word rendered in our tranſlation "*moved*" *Buttorf* makes this remark, "*Hebræi no-* "*tant verbum proprium eſſe avium alas mo-* "*titantium, dum vel pullos ad volatum pro-* "*vocant, ut aquilæ, vel ſe in* "*aere ſuſpendunt prædæ inhiantes.*" I prefer the *ſuſpenſion of the bird in the air*; becauſe the HOLY SPIRIT is deſcribed as deſcending like a Dove, at our Saviour's baptiſm: "JESUS, *when* "*he was baptized, went up ſtraightway out* "*of*

"*of the water; and lo, the heavens* "*were opened unto him; and he saw the* "SPIRIT *of* GOD *descending like a* "*dove, and lighting upon him.*" Mat. iii. 16. And will not this explain the emblem of the *Wings*, under which figure *Simmias Rhodius* describes the person of Love? The poet exhibits him, in lines fashioned into the form of wings, as the King, and Creator, and Ruler, of the universe; yet issuing himself from Necessity; which I apprehend to mean the cabalistic Fate, or, as revelation teaches us to call him, our Father in heaven. Had our critics considered the significance of the hieroglyphic, they would hardly have censured the author of this little piece, for moulding his lines in their present form.

Sanchoniatho's tradition, before *Simmias*, refers the Creation of the world to Love, or Cupid: "*He supposeth, or affirms, that* "*the principle of the universe was a dark* "*and windy air, or a wind made of dark*

"*air,*

"air, and a turbulent evening chaos: and "that these things were boundless, and for "a long time had no bound or figure." This part was quoted before. Next follows, "But when this wind fell in love "with his own principles, and a mixture "was made, that mixture was called De-"sire, or Cupid." When the dark air coalesced by condensation with the chaotic principles for the beginning of the Creation, this was an act of the Divine Love, which, putting the cause for the effect, is called, in the translation of the *Phœnician* tradition, Desire, or Cupid.

Dr. *Cudworth* brings further testimony, that the world made from a chaos by Love means the Creation by the SPIRIT of GOD, and is to be received as religious: "For that this ancient cabala, "which derived the cosmogonia from chaos "and Love, was at first religious, and not "atheistical, and Love understood in it not "to be the offspring of chaos, may be con-"cluded from hence; because this Love, as

" *well as chaos, was of a* Moſaical *extrac-*
" *tion alſo, and plainly derived from that*
" SPIRIT *of* GOD, *which is ſaid in*
" *ſcripture to have moved upon the waters,*
" *that is upon the chaos: whether by this*
" *ſpirit be to be meant* GOD *himſelf, as*
" *acting immediately upon the matter, or*
" *ſome other active Principle derived from*
" GOD, *and not from matter, as a mun-*
" *dane ſoul or plaſtic nature.* — *And that*
" *this tabala was thus underſtood by ſome*
" *of the ancient pagan cosmogoniſts them-*
" *ſelves, appears plainly, not only from* Sim-
" mias Rhodius, *and* Parmenides, *but al-*
" *ſo from the verſes of* Orpheus, *or who-*
" *ever was the writer of thoſe* Argonau-
" tics, *undoubtedly ancient, where chaos and*
" *Love are thus brought together,* —— *to*
" *this ſenſe*; We will firſt ſing a plea-
" ſant and delightful ſong concerning the
" ancient chaos, how heaven, earth, and
" ſeas were framed out of it; as alſo
" concerning that much wiſe and saga-
" cious Love, the oldeſt of all, and ſelf-

perfect; which actively produced all these things, separating one thing from another. "*From whence it is manifest, that, according to the* Orphic *tradition, this Love, which the cosmogonia was derived from, was no other than the eternal unmade* DEITY, *or an active Principle depending on it, which produced this whole orderly world, and all the generated gods in it, as to their material part, out of chaos and night.*" p. 249, 250.

ALTHOUGH the HOLY SPIRIT is the nominal CREATOR of the world in the History of the Creation; neither the FATHER nor the SON are to be esteemed by us as unconcerned in the work. That the SON is not to be excluded from the Creation is manifest, from the first and second verses of the first chapter to the *Hebrews*: "GOD, "*who at sundry times, and in divers manners, spake in time past unto the fathers "by the prophets, hath in these last days "spoken unto us by his SON, whom he*

"*hath*

"*hath appointed Heir of all things, by*
"*whom also he made the worlds.*" And
the LORD JESUS, in St. *John's* Gospel, declares unto *Philip*, "*the* FATHER
"*that dwelleth in me he doth the works.*"
chap. xiv. ver. 10. Finally we are not
to exclude the angels from all concern
in the work of GOD's Creation. For
thus saith the LORD to *Job*, c. xxxviii.
v. 6, 7. "*Who laid the corner stone there-*
"*of? When the morning stars sang toge-*
"*ther; and all the sons of* GOD *shouted*
"*for joy.*" Which is a manifest proof,
that these morning-stars attended the
CREATOR, when he began his work;
which comes next to be considered.

THE creation of the first day was
light in the exteriour part of the chaos,
whose inward parts had no communica-
tion with this light, but were dark
waters still, after the creation of the
light, as before. "GOD *said, Let there*
"*be light; and there was light. And* GOD
"*saw the light that it was good: and*
did."

"GOD

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THE creation of the first day was light in the exteriour part of the chaos, whose inward parts had no communication with this light, but were dark waters still, after the creation of the light, as before. "GOD *said, Let there* "*be light; and there was light. And* GOD "*saw the light that it was good: and* "*God*

"GOD

"GOD divided the light from the darkneſs. *And* GOD *called the light Day; and the darkneſs he called Night: and the evening and the morning were the firſt day.*" What was before called Deep, and Waters, has now the name of Night: whence we underſtand why the ancients imputed the origin of the world in ſo great a degree to night: ſince the uncreated world was a dark chaos, and was called Night by the CREATOR himſelf.

THE reaſon is evident why light was firſt made, notwithſtanding it was ſeparated from the world which was to be created. The CREATOR of the world was to govern, and rule over his creatures; for it cannot be conceived, that a Being infinitely good would leave his creatures to the effects of blind chance, after his infinite wiſdom had thought proper to give them an exiſtence. An habitation for the DIVINE glory was therefore requiſite; who afterwards would

have

have some particular place for the manifestation of his presence, in that part of the Creation which he particularly took under his protection, namely the stock of *Abraham*: appearing in the Mercy-Seat, whilst the ark and the tabernacle had their duration, and afterwards in the most holy place, when "Solomon *built him an house*." So GOD created the light for the place of his throne, to sit and judge the world which he was preparing; at whose right hand is JESUS the Son of GOD; "*Who* "*is the blessed and only Potentate, the* "*King of kings, and Lord of lords; who* "*only hath immortality, dwelling in the* "*light which no man can approach unto;* "*whom no man hath seen, nor can see;* "*to whom be honour and power everlasting.* "Amen." 1 Tim. vi. 15, 16.

CHAP.

CHAP. XVIII.

On the creation of the Firmament.

ON the ſecond day, GOD began the creation of what comes within our ſphere; and the work is deſcribed in theſe words: "*And* GOD *ſaid, Let* "*there be a firmament in the midſt of the* "*waters; and let it divide the waters from* "*the waters. And* GOD *made the firmament; and divided the waters which* "*were under the firmament, from the waters which were above the firmament; and it was ſo. And* GOD *called the firmament Heaven. And the evening and the morning were the ſecond day.*" The examination of this ſtate of the firmament will convey ideas very different from thoſe which philoſophers have delivered concerning it; and therefore it will be neceſſary to proceed ſlowly and ſurely with

the enquiry; taking the greateſt care to have truth continually in view, and not to be diverted from the ſight of it, by novelty, or prejudice.

In the firſt place, the *ſituation* of the firmament is certain; namely "*in the* "*midſt of the waters.*" And ſecondly the reaſon of this ſituation is plainly aſſigned: that a diviſion of the waters might be made by the firmament. Let the laſt point be examined firſt; for by this method we ſhall infallibly attain the knowledge of what we are ſeeking after.

The upper or exteriour waters of the chaos, could not *naturally* be kept from mixing with the lower concentrical waters, without being *fixed*. And as miracles muſt not be brought to aid an argument, where nature is clear; we are warranted to conclude, that the ſuperiour waters were *fixed* for their ſeparation from "*the* "*waters which were under the firmament.*" Thus far there is no room for the inſinuation of an errour to injure the enquiry.

THE next ſtep is made with equal ſafety, that nothing fixes waters in a natural way, beſides cold. From whence the concluſion is ſafe; that "*the firmament* "*in the midſt of the waters,*" was an expanſion of an actual cold in the midſt of the chaos; like the cold felt in thoſe parts of the earth which are hardly viſited by the rays of the ſun, but in an almoſt infinitely greater degree. And what effects an extreme cold would produce when the firmament was firſt made, may be tolerably well underſtood from the effects which it now produceth. At this time, it is the cauſe of ice, and ſnow, and therefore it's effects were the ſame amongſt the waters at the firſt. Dr. *Boerhaave*'s authority may be given here, which is more than neceſſary, to ſhew the preſent effects of the cold in the atmoſphere upon the waters of the atmoſphere. "*We* "*learn by experience, that the higher wa-*"*ter riſes into the air, the further it's parts* "*recede from each other, and the colder it*

"*grows:*

" grows: for we find by experiments, that
" in all the habitable parts of the globe,
" the heat is the greateſt, cæteris paribus,
" on the ſurface of the earth; and a freez-
" ing cold is conſtantly found on the tops
" of the higheſt mountains which are co-
" vered with ſnow. This holds true even
" under the equator, and in the torrid zones.
" The degree of cold alſo increaſes, in pro-
" portion, as we riſe from the foot of a
" mountain to the top; the increaſe being
" in proportion to that of the altitude.
" Hence, the water, riſing into the air, and
" coming to the freezing height, muſt ne-
" ceſſarily be turned to ice; unleſs all it's
" particles ſhould ſeparate, ſo as not to touch
" each other. But if at this height, the par-
" ticles of water, ſo diſperſed, ſhould by any
" means whatever come into contact; they
" muſt immediately begin to freeze into ſmall
" icy flakes, floating about in the air: and
" if they ſhould here happen to daſh againſt
" the ſurface of any bodies in their way;
" they would conſtitute a fine hoar-froſt,
" that

"*that would otherwiſe ſcarce be perceiv-*
"*able. From hence therefore*, there is a ſpace
"in the atmoſphere, concentrical with
"the earth, where the water of the air,
"when it arrives and unites, is conſtant-
"ly turned to ice. *'Tis however proba-*
"*ble, that this water, being at firſt little*
"*united, can ſeldom freeze, but remains float-*
"*ing about in it's ſeparate particles; till,*
"*ſome cauſe happening to unite them, it*
"*is then turned into ice.*" p. 404.

APPLY what, as the Doctor ſays, "we learn by *experience*," to the particular caſe of a middle region of cold, created at the beginning, in the waters then exiſting, or the unformed chaos. The induction of ſuch an extreme cold chilled and condenſed "*the dark windy*
"*air*," and cauſed both the air and contended waters to ſhrink towards the center of the chaos. Upon which, the upper and finer parts muſt naturally deſcend lower, according to the proportion of their denſity. For there muſt have been

been different degrees of denſity in the upper parts even of the firſt air, as in thoſe nearer the center. Upon this deſcent of the outer waters, "*they muſt immediately begin to freeze into ſmall icy flakes floating about in the air.*" As they deſcended from the utmoſt and largeſt circumference of the chaotic maſs, they were gradually and continually brought cloſer together, in their approach towards the center, whereby they muſt "*come into contact,*" and there, "*they muſt immediately begin to freeze.*" Hence, the firmament condenſed the chaos, and cauſed it to be encompaſſed by an icy expanſion, which effectually wrought a diviſion of the chaotic waters; whilſt the pureſt waters towards the extremity were fixed by the cold of the firmament, and the inferiour waters were by the ſame means compreſſed towards the center.

But how long could theſe waters remain fixed? Since the ſun was created on the day ſucceeding the creation of the

cold;

cold; would not it's new heat diſſolve the ice of the firmament, in as little time as it had been formed? It muſt indeed be acknowledged, that the weight of *Boerhaave*'s opinion is on that ſide of the queſtion; "*It has been found, that water,* "*rendered colder by forty degrees than it is* "*ever naturally found, will preſently thaw;* "*nor could this cold ever contract and con-* "*denſe water ſo as to give it the weight* "*and denſity of cryſtal, much leſs the ſolidity* "*of the diamond.*" P. 457. Yet that excellent author owns, that the contrary has been aſſerted for matter of fact, by men of eminence in his way: "*Some eminent* "*chemiſts have aſſerted, that water purified* "*and hardened by long froſt, is condenſed* "*into rock cryſtal; and pretend, that this* "*is found true, in the frozen mountains* "*of Switzerland towards the north, where* "*ice never thawing, is ſaid to be thus tranſ-* "*muted.*" ib. Again, P. 465, he ſpeaks to the ſame purpoſe; "*Some have pre-* "*tended, a long continued extreme cold could* "*turn*

"*turn water into cryſtal and gems, inſuſpa-*
"*ble of fuſing at a glaſs-houſe furnace.*"
Now what has the Chemiſt advanced to overthrow theſe facts or pretences? Why this only, that experiments were wanting to prove the weight and denſity of cryſtal or the ſolidity of a diamond acquired to ice by cold. And this is ſpeaking like a prudent and cautious philoſopher, not forward to receive as a truth what he had not a demonſtration of from *Farenheit*'s artificial cold; the production of which is mentioned by our author, p. 229 and 230. By pouring "*ſpirit of ni-*
"*tre upon ice ground very ſmall,*" that ingenious and diligent inquirer after truth produced a greater cold by forty degrees than was ever experienced in a natural way: and the ice of this very ſevere cold "*will preſently thaw.*" Yet it cannot be concluded from this experiment, that ice of a much ſeverer cold will preſently thaw, becauſe it ſo happens in this degree of cold. Nor would the wiſ-

dom

dom of the Chemiſt permit him to draw ſuch concluſions. On the contrary, theſe are his deductions from the experiment: "*No-body could have imagined any thing* "*like this.* —— *And who ſhall determine,* "*what further degree of cold may be excited* "*by other latent powers, either of nature or* "*art? Who can ſay what* changes *would* "*befal ſolid and* fluid *bodies, if* detained "*in ſuch degree of cold.*" Wherefore this judicious philoſopher doth not deny the poſſibility of the moſt unexpected *change* of water, by means of extreme cold. Nor do I fear to produce his further concluſions concerning the nature of water p. 465: "*Upon conſidering all that is here* "*diſcovered of water, we may ſay that it* "*is a certain ſpecies of* glaſs, *which melts* "*with thirty-three degrees of heat, and grows* "*hard in a little greater degree of cold:* "*whereby it becomes a ſolid, elaſtic, brittle,* "*pellucid, inſipid, ſcentleſs maſs, capable of* "*being ground into microſcopes, and burning-* "*glaſſes. This glaſs indeed is volatile, but*

"*in*

"in other reſpects reſembles common glaſs. "And here it is ſurpriſing, that the fluid "and ſoft body of water ſhould ſo quickly "be turned into a hard ſolid; and that "an unelaſtic fluid ſhould thus become highly "elaſtic; inſomuch, that, if formed of a "globular figure, it will rebound like glaſs, "or an elaſtic metal. This elaſticity and "hardneſs of ice increaſes in proportion "to the degree of cold whereto it is "expoſed; ſo as in the utmoſt degree "thereof to grow as hard as real glaſs, "and highly elaſtic; but when melted, it "preſently becomes volatile." The love of truth drew this queſtion from his ingenuous breaſt. "Who can ſay what changes "would befall ſolid and fluid bodies, if de-"tained in ſuch degree of cold?" And the ſame principle would have cauſed him to retract what he aſſerts as the properties of mercury, p. 81, if he had lived in the next age. "It is no way ductile "under the hammer, but diviſible with ſmall "force into very minute parts; and the more

"*ſo as it is the purer: nor is it capable, by* "*any known degree of cold, of coaleſcing* "*into a ſolid maſs.*" For notwithſtanding this could not be done by any known degree of cold in his time; it has been ſince proved by experiment, that, by a greater degree of cold, "*mercury is duc-* "*tile under the hammer, and capable of co-* "*aleſcing into a ſolid maſs.*" Which was manifeſted by the *Ruſſian* experiment, in which ſnow was uſed inſtead of powdered ice, and aqua fortis rather than ſpirit of nitre. The relation which I have ſeen of this affair begins in the 76th page of the *Annual Regiſter* for the year 1762: where the experiment is ſaid to have been made by "J. Braun *of the academy of ſciences,* "*&c.*" and "*Read at a meeting of the* "Royal Society, *in the month of* May, "1761, *and extracted from vol.* 52d, *part* "*1ſt of the* Philoſophical Tranſactions *for* "*the ſame year.*" That part of the proceſs which I think neceſſary to quote is as follows: "*By good fortune his ice was all*

" gone, and he was compelled to uſe ſnow
" in it's ſtead; after having firſt tried, and
" found the ſnow of the ſame degree of cold
" with the air, at this time 293. The ſnow,
" the thermometer, and the aqua fortis, be-
" ing of the ſame temperature, he immerſed
" the thermometer in ſnow, contained in a
" glaſs, and, at firſt, only poured a few drops
" upon that part of the ſnow in which the
" thermometer was immerſed; upon which
" he obſerved the mercury to ſubſide to 260.
" Elated by this remarkable ſucceſs, he im-
" mediately conceived hopes, that theſe ex-
" periments might be carried further. Nor
" was he deceived in his expectations: for,
" repeating the experiment in the ſame ſim-
" ple manner, he poured on only ſome more
" aqua fortis, and immediately the mercury
" fell to 380. Upon which, he immerſed the
" thermometer in another glaſs filled with
" ſnow, before it had loſt any of this ac-
" quired cold; and at length, by this third
" experiment, the mercury ſubſided to 470 de-
" grees. When he obſerved this enormous de-

mercury solid, he could scarce give credit to his eyes, and believed his thermometer broke. But to his infinite satisfaction, upon taking out his thermometer, he found it whole; though the mercury was immoveable, and continued so in the open air twelve minutes. He carried his thermometer into a chamber, where the temperature of the air was 125 degrees, and, after some minutes, the mercury being restored to its fluidity began to rise." In the same page, we are also informed that 470 below the cipher of *Fahrenheit*'s thermometer "*corresponds with that employed by Professor* Braun:" therefore when "*the mercury subsided to* 470 "*degrees*" of the Professor's thermometer, that was about 50 degrees lower than the degree of cold answering to *Fahrenheit*'s discovery. In this experiment, "*He found the mercury solid, but not wholly so, as the middle part of the sphere was not fixed. The external convex surface of the mercury was perfectly smooth; but the inter-*

"*nal*

"nal concave one, after the ſmall portion "of mercury which remained fluid was pour- "ed out, appeared rough and uneven, as though "compoſed of ſmall globules. He gave the "mercury ſeveral ſtrokes with the peſtle of "a mortar, which ſtood near him. It had "ſolidity enough to bear extenſion with theſe "ſtrokes; it's hardneſs was like that of lead, "though ſomewhat ſofter; and, upon ſtriking, "it ſounded like lead. When the mercury "was extended by theſe ſtrokes, he cut it "eaſily with a penknife." We are afterwards told that the like experiments have been made by divers others, with the like ſucceſs.

FROM hence it is certain, that additional degrees of cold, to what were known in *Boerhaave*'s days, produced effects unknown to that philoſopher: and, by conſequence, further additions may make the changes which could not be made by the cold known to him; and ſo the tranſmutation of ice "*into cryſtal* "*and gems, incapable of fuſing at a glaſs-* "*houſe*

"*house furnace*" becomes credible, or rather demonstrable by the Chemist's own rule. He says, "*This elasticity and* "*hardness of ice increases in proportion to* "*the degree of cold whereto it is exposed.*" What then if the cold, to which the ice is exposed, should be infinite in power? Why then, "*the hardness of the ice*" would be infinitely increased. This cold would presently "*contract and condense wa-*"*ter so as to give it the weight and den-*"*sity of crystal, and the solidity of the dia-*"*mond.*" And as we can conceive no limitations of the effect of the cold firmament upon bodies brought into the midst of it's power; it is certainly to be esteemed infinite in power. Therefore pure water, exposed in the pure cold of the firmament, may certainly acquire an elasticity and hardness far beyond that of the diamond. Upon the whole, the firmament may be pronounced indissoluble, by the greatest force of the sun's violence, till it pleased the ALMIGHTY

CREATOR to diſſolve it, for the purpoſe of drowning the world.

Sanchoniatho, if I underſtand him, mentions the firmament as the firſt of exiſtences in the chaos, as *Moſes* has done; and agrees further with *Moſes*, in repreſenting it as a ſhining ſubſtance, which he calls *Môt*: "*This mixture completed was* "*the beginning of the making of all things*; "*but that wind did not know it's own pro-* "*duction*; *and of this with that wind was* "*begotten* Môt, *which ſome call* Mud, *o-* "*thers the putrefaction of a watery mix-* "*ture, and of this came all the ſeed of* "*this building, and the generation of the* "*univerſe.* — *Thus* ſhone out môt, *the* "*ſun, and the moon, the leſs and the greater* "*ſtars.*" This part will be quoted again, intire, and examined hereafter: for the preſent, I have cited enough to ſhew that *Sanchoniatho*'s *môt* ſhining out, with the ſun, and the moon, and the ſtars, correſponds with the original brilliancy and ſituation of the *Moſaic* firmament.

I will conclude this chapter with obſerving, that in this repoſitory the rain-waters of the deluge were detained, until that period, when they were poured down by the CREATOR, for the deſtruction of his enemies. And to this agree the words of the ALMIGHTY in the 38th chapter of *Job*: "*Haſt thou entred into* "*the treaſures of the ſnow? or haſt thou* "*ſeen the treaſures of the hail, which I* "*have reſerved againſt the time of trouble,* "*againſt the day of battle and war?* V. 22, 23.

CHAP. XIX.

On the creation of the Seas and the Earth.

THE waters which were left under the firmament of heaven, greatly reduced, were on the third day "*gather-*
"*ed together*;" and the earth appear-

ed

ed. "*And* GOD *ſaid, Let the waters un-*
"*der the heaven be gathered together unto*
"*one place: and let the dry land appear.*
"*And it was ſo. And* GOD *called the dry*
"*land Earth, and the gathering together of*
"*the waters called he Seas. And* GOD
"*ſaw that it was good.*" The waters, beneath the firmament of heaven, were drawn together into one vaſt collection, above which the earth appeared, or emerged, by the command of the CREATOR. Which evidently ſpeaks the ſame thing, as that which is thus expreſſed in the 24th *Pſalm*: "*The earth is the*
"LORD'S, *and the fulneſs thereof; the*
"*world, and they that dwell therein. For*
"*he hath* founded it upon the Seas, *and*
"*eſtabliſhed it upon the floods.*" The correſpondence is ſo ſtriking, that no addition is neceſſary, to prove an agreement between the prophets *Moſes* and *David*: Otherwiſe the 6th verſe of the 136th *Pſalm* might be mentioned, and applied as a confirmation of the ſame doctrine: "*To*

" *him that ſtretched out the* earth above " the waters. "

THE bleſſing on the head of *Joſeph*, in the 49th chapter of *Geneſis*, is agreeable to what was ſeen before in the prophets: — " *the* ALMIGHTY *who* " *ſhall bleſs thee, with the bleſſings of hea-* " *ven above, bleſſings of the* deep, that li- " eth beneath. " As " *the bleſſings of* " *heaven above,* " are referable to the ſpaces above the earth, ſo " *the deep that* " *lieth beneath,* " muſt be underſtood of the depth of waters beneath the earth. And " *the bleſſing wherewith* Moſes *the* " *man of God bleſſed* " the tribe of *Joſeph* is the ſame as *Jacob*'s bleſſing upon his ſon: " *And of* Joſeph *he ſaid, Bleſ-* " *ſed of the* LORD *be his land; for the* " *precious things of heaven, for the dew,* " *and for* the deep, that coucheth be- " neath. " This language deſcribes emphatically the collection of waters called Seas, above which the earth was made to emerge.

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THE ſame is ſet out openly, clearly, and fully, as the true ſenſe of ſuch paſſages, in the twentieth chapter of the book of *Exodus*: "*Thou ſhalt not make* "*unto thee any graven image, or any like-* "*neſs, of any thing, that is in heaven a-* "*bove, or that is in the earth beneath, or* "*that is in the water under the earth.*

THE New-Teſtament corroborates this doctrine of the Old. For the words of St. *Peter* correſpond exactly to what *Moſes* teaches, that the earth was raiſed above the waters, with it's inferiour parts reſting in "*the deep, that coucheth be-* "*neath.*" His doctrine is: "*By the word* "*of* GOD *the heavens were of old, and* "*the earth ſtanding* out of the water, and "in the water." 2 *Peter* iii. 5. Where the language is ſo clear, it needs no comment.

TRADITION agrees with the doctrine of the Bible, placing the earth upon the ſeas, not confining the ſeas within the earth. What *Ovid* ſaith upon this

point shews the opinion of the ancients, about the situation of the seas, and of the earth; when he talks of the sea, *Amphitrite*, as extending her arms about the circumference of the earth: "*Nec brachia longo* "*Margine terrarum porrexerat* Amphitrite." Which proves that the situation of the earth was believed to have been on the bosom of the seas.

CHAP. XX.

The Mosaic *state of the Firmament confirmed by Phænomena.*

EXPERIENCE in the first place proves a Cold, where *Moses* has described it; the upper regions being found to increase in their degrees of coldness, as they are nearer to the firmament, or expanse; where this powerful cold was originally constituted. Philosophers have ascribed

aſcribed this phænomenon to the want of reflected rays from the ſun; which is a palpable errour. The planets are greatly enlarged by their conjunctions with the ſun, as I have ſhewn in my firſt volume. There it was alſo proved, that the increaſe of their magnitude is owing to their coming nearer the intenſe heat of the ſun. p. 98 — 100. Now ſince the ſun has power to dilate the planets which aſcend high above the earth, it has power in proportion over the higheſt parts of the earth; unleſs ſome other cauſe intervene, namely an actual cold, to moderate the violent heat: without which intervention men could not live in places on the earth ſubjected to the ſun's rays; where, notwithſtanding the interpoſed expanſion of a cold region, the heat is almoſt inſupportable; as we learn from thoſe who have reſided for a time within the tropics. Whilſt the icy firmament continued, the cold was conſtant, and extreme; no clouds or other cauſes then exiſting

exiſting to make a variation. So the heat being tempered by the cold, yielded that genial warmth of the perpetual ſpring, which is ſaid to have obtained in early times, in the golden age of the poets, before the commencement of the deluge.

I look upon the broken arch in the heavens called the *Milky-Way*, as the remains of the firmament. It has certainly the appearance of ſuch ruins, but is nothing like an aſſemblage of ſtars; which is the arbitrary explanation given by aſtronomers of this phænomenon. The Reader is left to form his judgment as his own obſervation ſhall direct him.

THE ſaltneſs of the ſea-waters, is a phænomenon clearly proving the exiſtence of the icy firmament. By the original cold, the ſalts were excluded from the waters of the firmament above, and attracted by the waters of the deep. As is evident from the preſent powers of cold to exclude ſalt from congealed waters; and from

the

the natural attraction between ſalt and waters in a fluid ſtate. "*The changed ice* "*of ſea-water is often uſed at* Amſterdam "*for brewing. And* Bartholine, *in his book* "de nivis uſu, *confirms this relation in the* "*following words*: 'Tis certain, ſays he, "that if the ice of the ſea-water be thaw- "ed, it looſes it's ſaltneſs; as has been "lately tried by a profeſſor in our uni- "verſity." *Boerh.* p. 440. n. The power of water, conſidered in a ſtate of fluidity, to unite ſea-ſalt with itſelf, is better known than to make a proof neceſſary; yet a word or two may be quoted from the Chemiſt, which will be unexceptionable authority: "*The next property to be* "*conſidered of water, is it's power as a ſol-* "*vent, whereby it diſſolves certain bodies,* "*and ſuſtains them* in a fluid form uniform- "ly intermixed among it's own particles. "*The bodies thus diſſolved by water are* "*the following*, viz. firſt, *ſimple foſſil ſalts,* "*both fluid and ſolid, as ſal-gem, ſea-ſalt;* "*&c.*" p. 448. The argument will be further

further purſued, when we examine the phænomena of the ſeas and dry land, in the next chapter.

CHAP. XXI.

The Moſaic *repreſentation of Seas and Earth confirmed by Phænomena.*

AFTER the creation of the firmament, which excluded the ſalts from the upper regions to the lower parts of the chaotic maſs; the waters were "*gathered together unto one place:*" Conſequently they carried the remaining corpuſcles of the chaos into one colluvies. By the emerſion of the earth above the waters, an abundance of heterogeneous particles were extricated from the waters, and lodged in the earth. But the ſalts remained; "*becauſe the water cannot be* "*ſeparated from them, they being ſo volatile*

"*as to fly off with the degree of heat re-*
"*quiſite to the ſeparation.*" ib. But there was no heat yet imparted to the world, and the ſevere cold of the firmament perfected the mixture of the ſalts, in the waters of the ſeas.

As the phænomena of the firmament and of the ſeas confirm the Hiſtory of the Creation; ſo the phænomena of the earth concur in the ſame cauſe. The dry land raiſed from the colluvies, although it left the ſalts in the waters, naturally brought up with it many tokens of it's aſcent from the ſeas. Which conſideration, I hope, will ſatisfy the naturaliſts, who judge, that the earth muſt have lain once diſſolved to atoms in water, from it's external and internal phænomena: without having recourſe to the vain hypotheſis of a total diſſolution of all the world by the deluge. For if the flood diſſolved and reduced the earth to it's primeval atoms; how did the "*olive-*
"*leaf*" eſcape the general diſſolution?

Noah, the ſecond time, "*ſent forth the* "*dove out of the ark. And the dove came* "*in to him in the evening; and lo, in her* "*mouth was an olive-leaf pluckt off. So* "Noah *knew that the waters were abated* "*from off the earth.*" *Gen.* viii. 10, 11. Leaves would have ſurely diſſolved, before rocks and mountains. Moreover the ark it ſelf could not have endured the wreck of the univerſe.

THE Hiſtory is further confirmed, by the extraordinary phænomena from the deluge. But, to prepare the way to certainty in the preſent enquiry, it will be neceſſary to trace out the incumbency of the ſeas, which preſſed, as we ſhall find, upon the garden of *Eden*; whoſe ſituation is conſequentially to be ſearched after.

The iſland of *Ceylon* in the *Indian* ſea is, according to *tradition*, the *Eden* which *Moſes* treats of; as may be learned from thoſe who have written of that iſland. And this part of the earth anſwers to the

deſcription

deſcription of the place in the ſecond chapter of the book of *Geneſis*: "*The* "LORD GOD *planted a garden eaſtward* "*in* Eden: *And there he put the man* "*whom he had formed.* —— *And a river* "*went out of* Eden, *to water the garden;* "*and from thence it was parted, and be-* "*came into four heads. The name of the* "*firſt is* Piſon; *that is it which compaſſeth* "*the whole land of* Havilah, *where there* "*is gold.* — *And the name of the ſecond* "*river is* Gihon; *the ſame is it that com-* "*paſſeth the whole land of* Ethiopia. *And* "*the name of the third river is* Hidde-"kel; *that is it which goeth toward the* "*eaſt of* Aſſyria. *And the fourth river is* "Euphrates." It is of the utmoſt importance in our preſent enquiry to get the true meaning of theſe few words: "*A river went out of* Eden *to water the* "*garden.*" The waters, here called a river, are denominated in the original *Nahar*; which word properly ſignifies a "*gather-*"*ing together of waters*," being derived

from the verb "*nahar, confluxit; ſed me-*
"*taphorice de hominum concurſu ſemper u-*
"*ſurpatur.*" *Buxtorf.* Therefore this term has the ſame meaning as the word *Mik-veh*, rendered "*gathering together*," in the firſt chapter. For, according to the afore-cited authority, *Mikveh* is "*conflu-*
"*entia, conceptaculum, congregatio*;" from "*Nikvah, confluere; de aquis: congregare ſe,*
"*de hominibus.*" A better authority may be produced yet, proving, beyond all contradiction, that the word rendered river, in the paſſage under examination, ſignifies the whole collection of waters, the ſeas, or the deep. For in this ſence it is uſed in the Bible, and tranſlated *floods*; where the ſeas beneath the earth are undeniably ſpoken of. The portion of Scripture referred to is in the 24th *Pſalm*: "*The earth is the* LORD'S, *and*
"*the fulneſs thereof; the world, and they*
"*that dwell therein. For he hath founded*
"*it upon the ſeas, and eſtabliſhed it upon*
"(Neharoth) the floods."

WHEREFORE,

WHEREFORE, the ſeas went out of, or from, *Eden*; ſo as to water the garden. The verb, here rendered "*to* "*water*," elſewhere ſignifies to cauſe to drink: as in *Numbers*, v. 24. "*And he* "*ſhall* cauſe *the woman to* drink *the bit-* "*ter water, that cauſeth the curſe.*" So the garden of *Eden* drank the waters of the ſeas, which preſſed againſt the foot of the hill on which it lay. For, ſurely, the garden was not upon a level with the ſeas, and overflowed by them; but, being a part of their boundaries, was naturally raiſed higher than that the waters ſhould cover it.

THE rivers, which had their ſources from the ſoaking of the waters through the adjacent hills, confirm the truth of what is here laid down reſpecting the garden of *Eden*: "*from thence it* (the "ſea) *was parted, and became into four* "*heads*," the ſources of the four capital rivers, *Piſon*; *Gihon*; *Hiddekel*; and *Euphrates*.

FOR

For it is a scripture doctrine, that the sea furnishes the springs, which become rivers, and return to the ocean: "*All the rivers run into the sea, yet the sea is not full: unto the place from whence the rivers come thither they return again.*" Eccl. i. 7. It is granted that many notable philosophers deduce the sources of rivers from exhalations. Even Dr. *Boerhaave's* opinion is, that springs have their origin from hence: "*All spring-water arises from rain, raised by heat from the surface of the terraqueous globe into the air, which thus abounding with water, and impinging by night against the cold sides of high and extended mountains; the watery vapours are here condensed into drops, after the manner of distillation: whence proceed rivulets, springs, &c.*" p. 462. But phænomena declare for the doctrine of the Bible. Of this you may be satisfied, by tracing the sources of rivers, as they are exhibited in maps, or by an actual survey

very of the situation of springs, from the heads of rivers to their return into the sea.

DURING that great length of time, from the Creation to the flood, the rivers naturally wore their way deep in the earth; for "*the waters wear the stones.*" *Job* xiv. 19. When they were sunk below the surface of the deep, they had the natural effects of vallies, to draw the waters of the ocean. Which were poured into these channels at the appointed time, when "*all the* fountains of "the great deep *were broken up.*" *Gen.* vii. 11. Then "*the sea — brake forth, as "if it had issued out of the womb.*" *Job* xxxviii. 8.

THE river *Gihon*, encompassing "*the "whole land of* Ethiopia," being, by it's situation, the nearest prey to the breaches of the sea, of course was the first subject of the inundation. The three other rivers seem to be, the *Red Sea*, the *Persian Gulph*, and the *Ganges*. Upon the

retreat

retreat of the deluge, by the new paſſages made upon and in the earth, the firſt river was again ſeparated from the original deep, and became the *Atlantic Ocean*; by the emerſion of the new continent of *America*. Which I take to be proved, by the ſilence of all ancient hiſtory in reſpect to what has been called the New-World.

As I formerly promiſed an explanation of *Sanchoniatho*'s memoirs, his repreſentation of the deluge now claims our notice. And ſince we are come again to take a further view of this moſt ancient tradition; for the better underſtanding of his obſcure writings as we proceed, I apprehend it not amiſs to quote his firſt chapter intire; notwithſtanding the extracts already fetched from thence. Let us therefore return to the firſt page of Biſhop *Cumberland*'s treatiſe.

"*THE COSMOGONY.*

"*He ſuppoſeth, or affirms, that the prin-*
"*ciple of the univerſe was a dark and*

"*windy*

" *windy air, or a wind made of dark air;*
" *and a turbulent evening chaos: And that*
" *theſe things were boundleſs, and, for a*
" *long time, had no bound or figure. But*
" *when the wind fell in love with his own*
" *principles, and a mixture was made, that*
" *mixture was called* Deſire, *or* Cupid.
" *This mixture completed was the beginning*
" *of the making of all things: (but that*
" *wind did not know it's own production,)*
" *And of this, with that wind, was begot-*
" *ten* môt; *which ſome call* mud; *others*
" *the* putrefaction of a watery mixture:
" *And of this came all the ſeed of this*
" *building, and the generation of the uni-*
" *verſe. (But there were certain* animals,
" *which had no ſenſe; out of which were*
" *begotten intelligent animals, and were cal-*
" *led* Zopheſemin, *that is, the ſpies or o-*
" *verſeers of heaven, and were formed alike*
" *in the ſhape of an egg.) Thus ſhone out*
" môt, *the ſun, and the moon, the leſs and*
" *the greater ſtars. Such, addeth* Euſebius,
" *is the* Phœnician *coſmogony, directly bring-*

"ing in atheism. Now let us see how he "affirms the generation of animals to be, or "subsist.

"He saith therefore: And the air shi-"ning thoroughly with light, by it's fiery "influence on the sea and earth, winds were "begotten, and clouds, and great defluxions "of the heavenly waters. And when all "these things first were parted, and were "separated from their proper place, by the "heat of the sun, and then all met a-"gain in the air, and dashed against one "another, and were so broken to pieces; "(whence) thunders and lightnings were "made. And at the stroke of these thunders "the fore-mentioned intelligent animals were "awakened, and frighted with the sound; "and male and female stirred in the earth "and in the sea. This is their generation "of animals.

"After these things, our author Sancho-"niatho goes on saying; These things are "written in the Cosmogony of Taautus, and "in his Memoirs, and out of the conjec-

"tures,

" *tures, and ſure natural ſigns, which his*
" *mind ſaw, and found out, and wherewith*
" *he hath enlightened us.*

" *Afterwards declaring the names of the*
" *winds,* North, South, *and the reſt; he*
" *makes this epilogue: But theſe firſt men*
" *conſecrated the plants ſhooting out of the*
" *earth, and judged them gods, and wor-*
" *ſhipped them; upon whom they themſelves*
" *lived, and all their poſterity, and* all be-
" fore them: *to theſe they made their meat*
" *and drink-offerings. Then he concludes:*
" *Theſe were the devices of worſhip, agree-*
" *ing with the weakneſs and want of bold-*
" *neſs in their minds.*"

IF I had not given the chapter intire, the manner how I would point and diſtinguiſh the parts could not ſo eaſily have been ſeen: which ſeems neceſſary towards underſtanding this dark hiſtory. You will obſerve, that I read the author's breaking off, from the creation of his *môt* to the *Zophesemin*, in a parentheſis; which makes the narration coherent and clear.

The mixture "*was the beginning of the* "*making of all things*;" of this was begotten *môt*, and every being in the univerſe, his animals excepted: "*Of this came* "*all the ſeed of this building, and the ge-* "*neration of the univerſe*;" (but not of the *Zopheſemin*, who were before the Creation of the earth, and were formed alike in the ſhape of an egg,) the *firmament*, the *ſun*, the *moon*, and all the *celeſtial bodies* were made from this mixture; "*Thus ſhone out* môt, *the* ſun, *and the* "moon, *the leſs and the greater* ſtars." By this way of reading we get clear of all difficulties reſpecting the Creation of the world, which men of learning have laboured in vain to remove.

By the Creation of the world I mean the inanimate world; and come now to enquire what *Sanchoniatho* means in his allegorical hiſtory of the "*generation of* "*animals*," beginning with my parentheſis: "*But there were certain animals* "*which had no ſenſe; out of which were* "*begotten*

"*begotten intelligent animals, and were cal-*
"*led* Zopheſemin, *that is the ſpies or o-*
"*verſeers of heaven, and were formed alike*
"*in the ſhape of an egg.*" I have thus far allowed of the ſuppoſition, that *Sanchoniatho* proceeds from his coſmogony to relate the original generation of animals: but it is now time to reflect upon the ſuppoſition as a miſtake. He ſaith, "*there*
"*were certain animals which had no ſenſe,*
"*out of which were begotten intelligent a-*
"*nimals.*" Here are animals exiſting before their creation, if *Euſebius* underſtands their "*generation*" in the ſenſe which ſeems requiſite. But I underſtand the preexiſtent "*animals in eggs,*" which gave birth to other animals, to mean the original ſtate of angels, who had not received their department, before the Creation. And others came in ſucceſſion after them, when the preceding miniſtring ſpirits retired, their charge being loſt in the deluge. Upon which it follows, that *Sanchoniatho*, inſtead of accounting for the

firſt

firſt generation of animals, as ſuppoſed, goes on hiſtorically, in his way, with an intimation that the firſt animals which had been created were loſt; and that the generations afterwards were ſuperintended by the "*animals in eggs*," which having lived in a dormant ſtate, as to the care of the world, appeared now "*as* "*intelligent animals*," to the generations after the flood. This ſeems to be pretty clearly the ſenſe of the myſtery, upon attention given to the words of our author: "*He ſaith therefore; And the air* "*ſhining thoroughly with light; by it's fiery* "*influence on the ſea and earth, winds were* "*begotten, and clouds, and great defluxions* "*of the heavenly waters. And when all* "*theſe things firſt were parted, and were* "*ſeparated from their proper place, by the* "*beat of the ſun; and then all met again* "*in the air, and daſhed againſt one ano-*"*ther, and were ſo broken to pieces; thun-*"*ders and lightnings were made: and at* "*the ſtroke of theſe thunders the fore-men-*

"*tioned*

"*tioned intelligent animals were awakened*
"*and frighted with the sound: and male*
"*and female stirred in the earth and in the*
"*sea.*" The first article to be examined is, "*the air shining thoroughly with light:*" which will be understood by reflecting on the nature of the firmament, as I have described and explained it. The power of the sun became sensible upon the firmament, after it had shone through it for so many centuries of years, as passed from the Creation to the flood. The surface next to the earth was the weakest part of this shining substance, the upper parts being more closely frozen, as the cold is experienced to increase upwards from the earth. Hence, when the time for the flood drew near, the firmament had gradually lost it's transparency, and became cloudy: and, by the same "*fiery influence on the sea and*
"*earth,*" exhalations ascended from both; and the air became violently agitated. Whence, of consequence, "*winds were*
"*begotten,*

" *begotten, and clouds*; " and the melting of the firmament poured down upon the earth " *great defluxions of the heavenly wa-* " *ters.* " By ſuch a horrible tempeſt, " *thunders and lightenings were made,* " and every phænomenon had place, which might diſmay and terrify the wicked inhabitants of the earth. All this agrees perfectly well with the circumſtances of the deluge, but is by no means applicable to the generation or creation of animals: for although our author calls theſe the *firſt* men whom he deſcribes as idolaters afterwards; yet they could not be reckoned amongſt the animals " *male and* " *female that ſtirred in the earth and in* " *the ſea*; becauſe he tells us plainly, that there were animals of the human race who lived before them. " *But theſe* " firſt *men conſecrated the plants ſhooting* " *out of the earth, and judged them gods,* " *and worſhipped them; upon whom they* " *themſelves lived, and all their poſterity,* " and all before them; *to theſe they*

" *made*

"*made their meat and drink-offerings.*"

THIS tradition, as it has been intimated before, comes from *Taautus*, who will be found the ſon of *Mizraim*, who was the ſon of *Ham*; which laſt-mentioned perſon we may look upon as the diſguiſer of the cauſe and hiſtory of the deluge. From the rebellious ſon of *Noah* we cannot expect any reflection on the influence of the rebellious angels, or any leſſons inculcating the fear of GOD. Only as an hiſtory of the Creation, and of the world, would be expected by his poſterity; it was neceſſary that facts tranſmitted from *Adam* to *Noah* ſhould be communicated: but it was not neceſſary to *Ham*'s purpoſe, that theſe facts ſhould be as clearly delivered by him, as, we may preſume, they were imparted by *Shem*, and *Japhet*; and as *Moſes* has publiſhed them. I can ſee here no foundation for a charge of atheiſm upon *Sanchoniatho*, more than upon any other unenlightened hiſtorian.

CHAP. XXII.

On the Situation of the stars, and the Motion of the sun.

POSSIBLY, it may be thought high time to consider the work of the Creation on the fourth day, which is described as follows: "*And* GOD *said, Let* "*there be lights in the firmament of the* "*heaven; to divide the day from the night;* "*and let them be for signs, and for sea-* "*sons, and for days, and years. And let* "*them be for lights in the firmament of the* "*heaven, to give light upon the earth;* "*and it was so. And* GOD *made two great* "*lights; the greater light to rule the day;* "*and the lesser light to rule the night: he* "*made the stars also. And* GOD *set them* "*in the firmament of the heaven, to give* "*light upon the earth. And to rule over* "*the day, and over the night, and to di-*

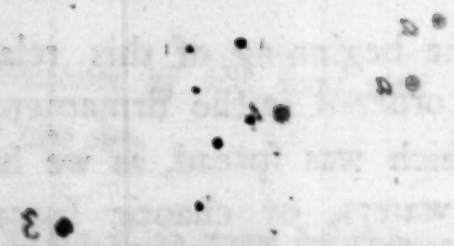
"*vide*

" *vide the light from the darkneſs. And* " *GOD ſaw that it was good. And the* " *evening and the morning were the fourth* " *day.* "

IN the beginning of this relation, the ſtars are ordered *in* the firmament of heaven; which was ſpread, as we have ſeen, in the waters, or chaotic ſpace of the ſeas and of the earth: " *Let them be for* " *lights* in *the firmament of the heaven.* " They were alſo appointed " *to divide the* " *day from the night:* " ſo they are ſituated on this ſide of the *light*, which was the firſt part of the Creation. By this limitation, they are repreſented by *Moſes* as in the neighbourhood of the earth, not at infinite diſtances from it. And by the annexed figures of the *Pleiades*, as ſeen with, and without, a teleſcope, a demonſtration ariſes, both of the proximity of the ſtars, and alſo of the ſun's motion.

THERE are more ſtars within the limits of the pleiades, than are noted in the figure; but theſe which are here ex-

preſſed are more than ſufficient for the demonſtration, that the ſtars are not far from us, and that the earth is immoveable.



THE above figure ſhews the pleiades as the naked eye ſees them: the next page exhibits them as they are ſeen by a reflecting teleſcope, of 18 inches.

THE ſtars which are numbred in the magnified figure anſwer to the ſix in the above little cluſter, and are the only ones that are viſible without the help of a teleſcope. The diſtance between the firſt and third appeared, upon a compariſon, to be nearly the meaſure of the moon's diameter. Thoſe marked with *a* have the firſt degree of magnitude, amongſt the teleſcopial ſtars; and thoſe with *b* are the ſmalleſt. Now for the uſe of the deſcription.

ASTRONOMERS

prefied are more than sufficient for the demonstration, that the stars are not far from us, and that the earth is immoveable.

a
a
4
3

THE above figure shews the pleiades as the naked eye sees them: the next page exhibits them as they are seen by a reflecting telescope, of 18 inches.

THE stars which are numbered in the magnified figure answer to the six in the above little cluster, and are the only ones that are visible without the help of a telescope. The distance between the first and third appeared, upon a comparison, to be nearly the measure of the moon's diameter. Those marked with a have the first degree of magnitude, amongst the telescopical stars; and those with b are the smallest. Now for the use of the description

ASTRONOMERS teach, that the earth, in the compaſs of a year, takes the ſame circuit which the ſun appears to take, in the ſame time: moreover they put the earth at about the diſtance of 80 millions of miles from the ſun; about which, ſay they, it performs an annual revolution, keeping always, nearly, at this diſtance from it. Upon this hypotheſis, when the ſun was entring into the ſign called *Sagittary*; the earth was going out of the ſign called *Taurus*; of which conſtellation the *pleiades* make a part; as before, the ſun was going out of *taurus*, when the earth was entring into *ſagittary*: and the *heliocentric* place of the earth is ſet down accordingly, in an *Ephemeris* for the year 1765. For it deſerves notice, that aſtronomers ſend us to the ſun to look for the true poſition of the earth, which they call *Heliocentric*. When the earth is in *taurus*, it is in conjunction with the *pleiades*; and when it is in *ſagittary*, it is then in oppoſition to them. The

The diſtance, between the places of conjunction and oppoſition, is the diameter of the earth's orbit, or 160 millions of miles. As I have remarked heretofore, an actual approach to an object, ſhews it, at leaſt, as conſpicuouſly and diſtinctly, as an artificial approach by a teleſcope. Wherefore, an actual approach of ſo many millions of miles towards the *pleiades* would, at leaſt, preſent us with a view of their enlarged ſtate, and the increaſed number of ſtars; as the teleſcope ſhews them in the figure. But the contrary to this happens, and no alteration is perceived in either reſpect, whether the earth's *heliocentric* place be in one or other of the conſtellations. Therefore the contrary to the hypotheſis is proved true, by the phænomena of *the pleiades*: the earth doth not change it's place, carrying us nearer to the ſtars at one ſeaſon than at another. The proximity of the ſtars to the earth, inſtead of the hypothetical immenſe diſtances of theſe bodies, is confirmed

ſigned by the ſame phænomena. A teleſcope cannot command immenſe diſtances; therefore the *pleiades*, which are, demonſtrably, within the magnifying power of the inſtrument, are not at an immenſe diſtance, as aſtronomers have imagined. My teleſcope will not command objects ten miles diſtant; I mean, it doth not ſhew them at that diſtance, as perfect as the eye ſees common objects, in a common way. But it ſhews the ſmalleſt ſtars in the figure perfectly diſtinct: wherefore, they are demonſtrated to be very near the earth, as *Moſes* deſcribes their ſituation; and not at the diſtances aſſigned them by philoſophers.

THE next chapter will demonſtrate, that the learned have been altogether as unſucceſsful in treating of the phænomena of the leſſer planets, as they have erred before in reſpect of the ſun, and the fixed ſtars.

CHAP.

CHAP. XXIII.

On the Light of the Stars.

AMONGST the ſtars, ſome are fixed, or unchangeable in their ſituations with reſpect to one another: the *pleiades* always preſerve the ſame diſtance from *aldebaran*; and *ſirius* is at all times equally diſtant from *orion*, and from every other of the conſtellations. But others are called *Planets*, "*wandring ſtars*," ever ſhifting from one part of the heavens to another. The latter are ſaid to be deſtitute of light; which *Moſes* attributes to all the ſtars, without an exception: "GOD *ſaid, Let them be for lights* "*in the firmament of the heaven, to give* "*light upon the earth.*" And here, as in all other caſes, phænomena contradict the hypotheſes of philoſophy, and confirm the *Moſaic* Hiſtory. A few remarks on

the phænomena of *venus* will evince this truth, that Scripture hath not obtained the eſteem which it merits.

THE philoſophical phænomena of the planet may be ſeen in the fourth chapter of *Graveſande's* Elements: "*It is in* "*conjunction with the ſun in two manner* "*of ways, but never in oppoſition.*" P. 168. The conjunctions are diſtinguiſhed, by the appellations of ſuperiour, and inferiour. And the author, in his figure, and references to explain the phænomena of the planet, marks the ſuperiour conjunction by the ſmall *Roman* v, and the inferiour by the capital V. Putting therefore the words in the place of their ſigns, the following is a juſt quotation. "*This planet ſhines with light borrowed* "*from the ſun; and that hemiſphere only* "*which is turned to the ſun is enlightened,* "*the other hemiſphere is inviſible: there-* "*fore that part only of the enlightened he-* "*miſphere which is turned to the earth can* "*be ſeen from it; in the inferiour con-*

"*junction,*

"*junction, the planet cannot be ſeen: in*
"*the ſuperiour, it would appear round, if*
"*the ſun's rays did not hinder it from be-*
"*ing ſeen.*" p. 170. "*Going from the*
"*ſuperiour conjunction the planet continual-*
"*ly decreaſes;* —— *and continues to de-*
"*creaſe, till it vaniſhes at the inferiour*
"*conjunction; and then again increaſes ſuc-*
"*ceſſively, changing it's figure, till the whole*
"*enlightened hemiſphere be turned towards*
"*the earth.*" p. 171.

PERMIT me to compare my own obſervations with theſe doctrines, which are termed phænomena. The ſuperiour conjunction happened on the ſixth day of *June*, 1765. From which time I continued, a great while, to watch attentively for a ſight of the planet, near the ſetting of the ſun; being confident; that if the whole body was enlightened, it might be ſeen preſently after the ſun was gone down, when the planet had moved a little way beyond the place of conjunction, from the power of the ſun;

or might even be ſeen with the ſun, as I had found it to appear after the preceding inferiour conjunction. Four months paſſed, before I could diſcover the object of my attention. For I find, by my notes, that the 25th of *September* was the firſt evening of my perceiving the planet, which was gone then a good way from the ſun, of which courſe I had nearly an horizontal view. I had fitted hairs in my teleſcope, by the help of which, and without them indeed, it was clear enough that the planet appeared leſs than I had ever obſerved it before: which was certainly the cauſe of my not perceiving it ſooner. But the exceſſive luſtre, of this ſmall body of light, made it impoſſible for me to aſcertain the bounds of the light, or the figure of the planet. It troubled me much, that I could not, for a conſiderable ſpace of time, define the planet, by reaſon of it's flaming ſplendour, perceiving it to increaſe continually, whereas philoſophy ſays, that "*the*

"*planet*

"*planet continually decreaſes*" after this conjunction, "*and continues to decreaſe till* "*it vaniſhes*;" and I feared it might attain it's full form before I ſhould be able to mark it's alterations. For I was convinced in my own mind, that the form of the planet was *lunular*, as in the other conjunction, but wanted an ocular proof. I had an aperture made in the ſcrew-piece that cloſes the tube, but this rendered the viſion dark, and confuſed. The aperture was enlarged; and, after many trials, I partly attained my purpoſe. For a hollow appeared, very evidently, on the left hand, whilſt the right ſide appeared complete, as a growing moon. Afterwards, when the piece was taken off, venus ſhone like the moon when near her firſt quarter; the luſtre ſtill cauſing however a ſlight diſturbance of the viſion, but not hindering the perception of the planet's form. The confuſion was at laſt quite removed, by making the obſervation as early as poſſible in the evening,

evening, whilſt the day-light weakened the glare of the planet's light, eſpecially if a cloud coming over it cauſed the light to be more faint and dim, ſo as barely to make the planet a viſible object without a teleſcope. In theſe circumſtances, the figure and ſhape were very diſtinctly obſerved.

UPON this compariſon of experiment with theory, venus is found to be increaſing, at the time when philoſophy will have it that "*the planet continually* "*decreaſes, and continues to decreaſe, till* "*it vaniſhes.*" And the errour ariſes from the attempt to make venus an opaque body, and, on that ſuppoſition, to explain the variations of it's form, by the ſun's rays enlightening the parts of the planet on which they fall, and bringing darkneſs on the part of it's ſurface from which they are withdrawn. But the ſun by his fiery influence diſrobes the planet of her gaudy brightneſs, leaving her in darkneſs and obſcurity, inſtead of giving her luſtre,

tre, at the time when ſhe is ſmitten by the full force of his rays. However the light of the planet is only obſcured, not deſtroyed by the violent heat, ſhining brighter, after a while, when it is freed from the ſun's dominion, as if purified by the fire. The planet is enlarged, as all bodies are, by heat; but much more in the inferiour conjunction, than in the other. After the increaſe, mentioned above, is completed, and venus returns towards the ſun, her light decreaſes, like the light of the moon, till it periſhes at the conjunction. This I had ſeen before; and was aſtoniſhed at the increaſe of the moon-like phaſe by the conjunction, which proved the increaſe of the whole body of the planet, although the refurgent light only ſhewed it ſelf.

THE diſtinction is very viſible between the different conjunctions of the other planets alſo. I do not ſpeak of *mercury*, having never yet been able to ſee him when a morning ſtar; in the even-

ing

ing he appears ſmall as *mars* in miniature, and not according to his deſcription in Dr. *Keill*, p. 33: "*Mercurius ſemper in* "*vicinia ſolis commoratur: propius ſemper* "*abeſt a ſole quam venus; adeoque, veneris* "*æmulus, in orbita minore intra veneris or-* "*bitam concluſa et ſolem ambiente neceſſario* "*locandus erit. Præcipue vero, cum eum ſo-* "*li quam proxime eſſe oſtendit egregius illi-* "*us* ſplendor, *quo et* veneri cæteriſque pla- "netis *longe antecellit.*" But with regard even to *jupiter*, although the ſun has not power to give him a ſable countenance, his face is nevertheleſs ſtrongly marked by the ſun's impreſſion. Theſe marks, I believe, are only ſeen a little while after the inferiour conjunction. Not that I apprehend the planets to be more remote from the ſun in one conjunction than the other, but the cold exceeds in the regions above the ſun, and mitigates the force of his fire.

THE ſame cauſe alſo continues their dimenſions to the planets, with the leaſt alteration,

alteration, in the ſuperiour conjunctions. For cold is a kind of *vis inertiæ*, to keep bodies, condenſed by it, in a ſtate of reſt: "*The end of cold, is a ſtate of abſolute* "*reſt between coherent particles*; *and the* "*end of fire, a perpetual agitation of diſ-* "*ſolved particles.*" *Boerh.* p. 220. The author ſpeaks again to the ſame purpoſe, p. 222: "*Cold* —— *makes the ſeveral* "*parts whereof the body conſiſts, cohere more* "*ſtrongly to each other, ſo as not to be ſo* "*eaſy to be torn or ſeparated from the ad-* "*joining one, as before: which is another* "*cauſe of the ſtability found in bodies.*" Hence, though the cold cannot prevent, altogether, the tokens of the ſun's ſuperiour power; yet, the planets being leſs dilated in this conjunction than in their inferiour appulſe to the ſun, they are conſequently denſer, and firmer; and ſo continue leſs liable to an alteration. "*All* "*bodies of a ſolid ſtructure are equally ſub-* "*ject to this action of cold*; *nor has any* "*been yet found, however denſe and com-*

"*pact, but cold renders it ſtill denſer, not* "*even excepting diamonds the hardeſt of all* "*known bodies.*" p. 219. Which phænomenon corroborates, further, the account of the firmament before given.

CHAP. XXIV.

On the Light of the Sun.

BESIDES the ſtars, "GOD *made two* "*great lights; the greater light to* "*rule the day, and the leſſer light to rule* "*the night.*" Theſe are indiſputably the ſun and moon: both of which, notwithſtanding their obvious appearances, have been ſpoken of by the learned in terms contradicted by their phænomena. We will begin, according to the order of Scripture, with the ſun.

COMMON-SENSE induces us to believe, that heat comes with light from the

the ſun, as from it's fountain. Yet Dr. *Boerhaave* differs from the common notion; whoſe abilities and care, as one would imagine, enabled him to judge of the nature of heat, or fire, as well as any man whatſoever; who aſſerts alſo, that "*there is but one kind of fire in all nature; and, that elementary and artificial fire are always the ſame.*" p. 366. But let us examine the grounds and reaſons of the Doctor's departure from the general opinion: "*I have been in ſuſpenſe ſome time, whether or no I might venture to publiſh an opinion which has frequently employed my thoughts; and at length have determined to do it. It is probable, that, in the action of fire obſerved among us,* the ſun does not emit any fiery matter, *to which ſuch action ſhould be attributed; but, that this luminary only has a power of directing the fire; already exiſting in any place, into parallel right lines; from whence, the ſame quantity of fire, being again collected out of it's*

" *it's paralleliſm, by reflection, or refraction,*
" *and united ſtill cloſer, acquires new powers;*
" *and thus is enabled to produce all it's ef-*
" *fects. To illuſtrate this by an eaſy expe-*
" *riment: Suppoſe a hollow braſs cube, up-*
" *wards of three inches ſquare, and cloſed*
" *every way; except, that one ſide being*
" *taken off it is left open there; and ſuppoſe*
" *this cube directly oppoſed by it's open ſide*
" *to the ſun, only covered with a white pa-*
" *per: In the cavity of it apply M.* Fahren-
" heit's *tender thermometer, which conſiſts*
" *of a moveable ſpirit, while the paper pre-*
" *vents the ſun's rays from penetrating the*
" *cavity of the cube; and if the wea-*
" *ther be cold, we ſhall find an intenſe cold*
" *in the whole vacant ſpace of the cube.*
" *Take away the paper at once; and,* at
" the moment *that the cavity of the cube is*
" *illuminated by the ſun, there immediately*
" *ariſes a conſiderable heat, which the thermo-*
" *meter indicates. Philoſophers uſually main-*
" *tain, that the heat here admitted was ſent*
" *from the ſun's body with a* velocity ſcarce

" to

" to be conceived: *to me it rather ap-*
" *pears, that the ſun has only done now*
" *what it did before, and which it always*
" *does,* viz. *determine what we call fire in-*
" *to right lines, which can now reach the*
" *opaque body, without any obſtacle; and thus*
" *drives the fire, which before, while the pa-*
" *per interpoſed, was equably diffuſed through*
" *the ſix containing ſquares: drives it, we*
" *ſay, without altering it's quantity, in right*
" *lines oppoſite to the open one; and thus*
" *heats the whole cavity, but eſpecially ſuch*
" *ſide, by merely directing the rays; and* not
" by any increaſe of their number. *Or*
" *ſuppoſe M.* Villette's *ſpeculum to be di-*
" *rectly oppoſed to the noon-day's ſun, but*
" *covered over with a white veil; we ſhall*
" *have no more fire or heat produced in it's*
" *cavity behind the veil, than at any where*
" *elſe: but* at the inſtant *you remove the*
" *veil, the fire, which before remained in-*
" *determined in the cavity of the ſpeculum,*
" *is driven in parallel lines againſt the con-*
" *cave reflecting ſurface of the ſpeculum;*

" *by*

" *by which means the vehement fire is pro-*
" *duced, in it's focus, and* not *as uſually*
" *imagined,* projected from the ſun. *In*
" *effect,* 'tis neither more nor leſs now
" than before, *but only in a different di-*
" *rection. The ſame will hold in a refract-*
" *ing burning-glaſs. And thus, neither the*
" *fire produced by colliſion, nor by a burn-*
" *ing ſpeculum, nor a glaſs lens, appears to*
" *owe any thing of it's* matter *to the ſun.* "
p. 281, 282.

Do not theſe experiments conſpire againſt the author, who would force them into his ſervice? The former is much as if I ſhould ſtand in a room, near an outer door, expoſed to the ſun's rays; and finding the heat troubleſome, ſhould ſhut the door, and obtain an agreeable coolneſs. If I pronounced the quantity of heat the ſame in the ſame place, after the excluſion of the rays, as at their admittance, when a cool ſucceeded upon the abſence of the ſun's heat, no one, ſurely, would credit my aſſertion. Next for

for the ſpeculum, or lens, Here is firſt an exquiſite poliſh, of a proper figure, which collects the rays in a prodigious quantity, as is manifeſted by the wonderful effects of the collection, when the abundance of rays, thus united in one place, are reflected or refracted. A veil is put over the ſpeculum, and it preſently loſes that power which before appeared. What elſe could be expected? Suppoſe the ſpeculum ſhould be ſpoiled by a multitude of ſcratches. Certainly it cannot, after this, be regarded as a ſpeculum; when it is reduced to a piece of rough metal. The veil has a temporary effect, like that of the deſtructive ſcratches, which would intirely cauſe the combination of rays to ceaſe, and then the effects ſucceeding ſuch a collection muſt ceaſe likewiſe. But in the firſt caſe the admiſſion of the ſun's rays cauſing heat in the cube, which ceaſed upon their excluſion, is a ſenſible proof, that the heat proceeds from the ſun. And in the

the other inſtance, where a collection of an immenſe quantity of rays into one place ſhews ſurpriſing effects, the proof is evident, that theſe effects are owing to the quantity of rays collected, and iſſuing together, by means of the lens, or ſpeculum. The burning-glaſs has almoſt an incredible power: " *All combuſtible bo-* " *dies placed in this focus immediately burn*; " *lead melts inſtantaneouſly*; *and tiles vi-* " *trify, if long enough held in it.*" p. 278. The ſpeculum has yet a greater power: " *The ultimate effect of any* momentary *ac-* " *tion of fire, hitherto obſerved, is to turn* " *flint to glaſs*; *which is done in the fo-* " *cus of* Villette's *ſpeculum: nor has any* " *effect greater than this been ever known.* " *For though lightning will inſtantly melt* " *iron, it has never, I think, been known* " *to* vitrify, *either ſtones or metals.*" p. 277. It ſeems here to be the author's opinion, that lightning never *vitrifies* any ſubject. But there is, in this neighbourhood, a ball of glaſs judged to be a thunder-bolt,

der-bolt, from the following tradition: A great-uncle to the gentleman who has now the ball in his poſſeſſion was afflicted with deafneſs, in a great degree; who being in his orchard heard a noiſe over his head, which cauſed him to look upwards; whereupon he obſerved the bark cut from the limb of a tree, under which he was ſtanding, as by a ſtroke from ſomething that had fallen from above; and looking down he ſaw the ball which has been mentioned, lying on the ground before him. It is cracked deep within the ſurface, which is certainly the effect of the ſtroke. The form of the bolt is ſomewhat elliptical: it's largeſt dimenſions are almoſt ſeven inches; and the leaſt a little more than ſix inches and a quarter: the weight is almoſt ſeven ounces.

THAT ſubjects capable of vitrifying are lodged in the air, is inconteſtible; which "*may be properly conſidered as an* "*univerſal chaos, conſiſting of almoſt all* "*kinds of corpuſcles, confuſedly jumbled toge-*

"*ther, and conſtituting one maſs.*" p. 399. Wherefore a plenty of corpuſcles may ſtand in the way of lightning, liable to run into a maſs, and to make a larger thunder-bolt than the above-mentioned one. Hence it is proved, that lightning, which is a collection of rays and therefore acts like the focus of a ſpeculum, is not exceeded in the force of it's operations, by any devices of art. It is alſo proved, by all that has been ſaid concerning the effects of the ſun's rays, that fire is increaſed, in any aſſigned place, by increaſing the quantities of rays, in the ſame place.

COMMON experience informs us further, that the fiery globe of the ſun drawing towards us brings heat, and the ſeaſon which we call ſummer; and that it afterwards retires from us, and leaves us, by that means, cold, and winter. But aſtronomy contradicts this, teaching that the ſun is neareſt to us in winter, and moſt remote in ſummer: "*Cum in* æſ-

"tate

" tate *terra* longius *a ſole diſtat*, hyeme " propius *ipſi accedat*; *mirum fortaſſe vi-* " *detur*, *recedente ſole terram magis inca-* " *leſcere*; *hyeme autem*, *cum propius ſoli ad-* " *ſtamus ingraveſcere frigora.*" Keill. p. 93. It ſeems ſtrange indeed, as this eminent aſtronomer ſays, that it ſhould be hotteſt in ſummer, if the ſun then goes from us; and, that the cold ſhould come on ſeverely in the winter, if we are then neareſt to the ſun. Several ſalvos are ſet, as arguments, againſt the teſtimony of phænomena, which may be found ſubjoined to the quotation.

It ſeems more pertinent, to me, to examine the philoſophical reaſons for aſſigning the ſun's approximation to the winter; and his going off from us to the ſummer. I ſhould have ſaid *reaſon*, and not reaſons; for I know but one argument alleged as a proof, that the ſun is abſent from us in ſummer; and preſent with us in winter; which is, that the apparent diameter of the ſun is leaſt

in ſummer; and greateſt in winter. " *Ob-*
" *ſervationes quoque oſtendunt diametrum ſo-*
" *lis apparentem tempore hyberno, ubi mo-*
" *tus ejus eſt velociſſimus, majorem eſſe quam*
" *in æſtate, ubi ſol tardiſſime incedit. Et dif-*
" *ferentia quidem tanta eſt, ut hyeme, ubi*
" *ſol maximus apparet, videtur ſub angulo*
" 32', *et* 47'': *at æſtate, ubi minimus, e-*
" *jus diameter eſt* 31', 40''; *quæ differen-*
" *tia minuto major eſt*; adeoque *longius*
" *debet abeſſe æſtate, quam hyeme.* p. 86.

If a cauſe can be aſſigned for the increaſe of the ſun's diameter upon the increaſe of his diſtance from us, all is ſafe; we may ſtill truſt our ſenſes before philoſophy. *Refraction* then, is the obvious cauſe of this phænomenon; whoſe effects have not been duly ſtudied, or regarded. What is meant by refraction, is better known than that any thing is neceſſary to be premiſed, by way of definition, or explanation. Let it only be conſidered, that " *in general, the eye be-*
" *ing placed in a rarer medium, the object,*
" *that*

" *that is ſeen in a denſer medium, appears* " *bigger, and is alſo brought nearer, by re-* " *fraction. This is every day confirmed by* " *experience, when we look at objects in the* " *water,* " Graveſ. p. 69. A winter-ſun is depreſſed towards the horizon, where it is ſubject to refraction; from which the ſummer-ſun is free in it's elevated ſtate: " *Quo obliquior eſt radius in terram* " *incidens, eo major eſt refractio; adeoque,* " *in horizonte refractio eſt maxima. Et ſtel-* " *la magis quam* 50 *gradibus ſupra hori-* " *zontem elevata, nulli ſenſibili obnoxia eſt* " *refractioni.* " Keill. p. 312. Wherefore the winter-ſun " *appears bigger by refrac-* " *tion.* " Hence the apparent increaſe of the dimenſions of an horizontal ſun and moon are eaſily accounted for. See p. 101.

ONE inſtance more may be here inſerted, concerning the effects of refraction, that the *needle* is directed towards the north from the ſame cauſe. This appears from an experimental proof, of the effect of refraction upon the needle by glaſs,

glaſs, and the certain knowledge that the refraction of the denſeſt air bears a proportion to the refraction of the glaſs. "*Nor muſt it be omitted, that this pure* "*elementary fire, if directed by the ſun* "*through the burning-glaſs of M.* Tſchirn-"haus, *ſo as to fall on the iron needle of* "*a mariner's compaſs in the very point of* "*the focus or contact, will drive the nee-*"*dle round on it's pivot, by a true corpo-*"*real percuſſion.*" Boerh. p. 359. The cauſe of driving the needle round on it's pivot is the force of the ſun's rays, collected to a ſufficient quantity, by the refraction of the lens. Therefore any other refraction collecting the rays in a ſomewhat like manner, muſt have a ſomewhat like effect upon the needle. Now conſider how great the attractive force of the air muſt needs be in the north, where it's denſity is ſo much greater than in places nearer the line. And it has indeed been proved by experience, that, in the cold denſe air of

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the northern regions, the rays are attracted *thither* with a force not unlike that of a lens. M. *Maupertuis* was ſent by the *French* king, to determine the figure of the earth near the polar circle. From whom we have the information following: " *Tho' in this climate the earth is thus* " *horrible, the heavens preſent the moſt* " *beautiful proſpects. The ſhort days are no* " *ſooner cloſed, than* fires of a thouſand " colours and figures *light up the ſky*; " *as if deſigned to compenſate for the abſence* " *of the ſun, in this ſeaſon. Theſe fires have* " *not here, as in the more ſoutherly climates,* " *any conſtant ſituation. Though a luminous* " *arch is often ſeen fixed towards the north,* " *they ſeem more frequently to poſſeſs the* " *whole extent of the hemiſphere. Sometimes* " *they begin in the form of a great ſcarf* " *of bright light, with it's extremities upon* " *the horizon, which, with a motion reſem-* " *bling that of a fiſhing-net, glides ſwiftly* " *up the ſky, preſerving in this motion* a di- " rection nearly perpendicular to the me- " ridian:

" ridian: *and moſt commonly, after thoſe* " *preludes, all the lights unite at the zenith,* " *and form the top of a kind of crown.* " —— *Their tops are all placed* in the " direction of the meridian, *though with* " *a little* declination to the weſt; *which* " *I did not find to be conſtant, and which* " *is ſometimes inſenſible.* " Newberry's Collect. vol, 20. p. 207, 208.

We learn from this report of *facts*, that the denſe air of the north very powerfully refracts the ſolar rays, " *in* " *the direction of the meridian:* By which refraction, the rays, being drawn to the north, will hold the *direction* of the needle in the way of their emanation. The author found the direction of the light to be " *with a little declination to the* " *weſt*; " and our pole of the earth moves, in the language of philoſophy, weſtward continually; and therefore carries the denſe attracting air the ſame way: " *Polus ſemper fertur, motu lentiſſimo,* " *ab oriente in occidentem.* " Keill. p. 82.

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This is alſo according to the *variation* of the needle. But he found exceptions to the rule of the light's direction; which are likewiſe found in the direction of the needle: "*Poli magnetis* nec, *in eodem lo-* "*co*, conſtanter *eandem mundi plagam in-* "*dicent.*" Mercator. Inſtitut. Aſtron. p. 10.

CHAP. XXV.

On the Light of the Moon.

THE moon is one of the bodies which *Moſes* calls great lights: "GOD *made two great lights; the greater* "*light to rule the day, and the leſſer light* "*to rule the night, the ſtars alſo,*" to have influence, with the moon, towards enlightening the earth by night. Which is thus expreſſed by the *Pſalmiſt*, "*the* "*moon and ſtars to rule by night; for his*

" *mercy endureth for ever.* " Pſ. cxxxvi. 9. But notwithſtanding the attribution of light to the moon by it's CREATOR, and the faithful relation, of what GOD wrought, by *Moſes* his inſpired ſervant; the philoſopher aſſerts that the moon gives not a proper light to the earth, but only reflects the light of the ſun. The foundation for this aſſertion is, that the moon is eclipſed in paſſing through the ſhadow of the earth, or rather the ſhadow of the atmoſphere: " *An eclipſe of the moon, is* " *the obſcuration of the moon by the* ſhadow " *of the earth.* " Graveſ. p. 176. The author corrects himſelf in the next page, and aſcribes the eclipſe to the *ſhadow* of the atmoſphere, imputed before to the earth's ſhadow: " *We have hitherto ſpoken* " *of the ſhadow of the earth; becauſe when* " *we mention the earth, we underſtand it's* " *atmoſphere which is joined to it: the ſha-* " *dow of the atmoſphere is properly conſi-* " *dered in lunar eclipſes; for the ſhadow* " *of the earth it ſelf* does not reach *the* " *moon.* "

" *moon.* " We may ſay, concerning ſuch philoſophy, as *Job* ſpeaks in his twelfth chapter : " *Ask now the beaſts, and they* " *ſhall teach thee ; and the fowls of the* " *air, and they ſhall tell thee, Or ſpeak to* " *the earth, and it ſhall teach thee ; and* " *the fiſhes of the ſea ſhall declare unto* " *thee.* " v. 7, 8. A worm, a bone, a piece of wood, and other ſubſtances inform us, that bodies apparently light are not obſcured by ſhadows, or darkneſs : on the contrary ; they are more conſpicuous when the prevalent light of the ſun is withdrawn from them. Beſides, a ſhadow hanging to the earth is a chimera ; the light of the ſtars preventing ſuch a ſhadow, which were appointed " *to* " *give light upon the earth.* " Gen. i. 15. Moreover, the moon is ſeen uneclipſed by clouds endued with *ſubſtance*; and cannot therefore be cut off from our ſight by, the interpoſition of nothing but, a ſhadow.

BUT curioſity may aſk, What then is

the nature of the moon's light, if it reflects not the light of the ſun? If you can ſee the moon when ſhe is very near the ſun, a little after or before a new-moon; you may perceive very diſtinctly the face of the old-moon, which is gradually covered by the new growing over it. It is a curious and pleaſing ſight to obſerve theſe different phaſes by the teleſcope. Once or twice, I have ſeen the old-moon white; when it reſembled white paper as viewed by a magnifying glaſs: but it generally happens, that the old-moon, though ſenſibly diſcerned, has only a faint light, or a duſky appearance, like the dingineſs obſerveable on a full-moon. The new grows over the old, more and more, daily; till at laſt the one is totally covered, and hid within the other. The covering is *ice*; which ſpreads in this manner: On the left ſide, where the hollow of the growing moon appears, cryſtals ſhew themſelves diſtinctly, and ſeparately, ſome in lines, others in ſmall ſurfaces;

faces; and in many parts there is no viſible ſhoot, or linear extenſion of the cryſtal, but points, and ſpecks, or greeniſh vivid ſpots of different ſizes. The next evening, the cryſtals of the preceding day are loſt, in the increaſe of the new-moon's dimenſions: And then other cryſtals appear, onward the ſame way, and in the ſame manner, as before; which ſubmit likewiſe in their turn to the ſpreading ice. Thus it continues till the moon is full, only the cryſtallization is not performed in ſo very minute a manner as at the firſt. When the full-moon is completed, the ice begins to break on the right ſide, and, as it wears away, preſents the ſame phænomena on the decreaſing ſide of the moon, as were ſeen before by the increaſe.

FROM hence I am perſuaded, that the moon is a compoſition of cold; as the ſun is a fire. And I ſubmit it to the conſideration of better judges than my ſelf, whether the neareſt ſalts, contained in

in the waters, which were left above, may not be attracted by the cold moon, and there frozen? and whether this attraction may not be continued, from the fineſt and pureſt vapour above, down to the waters of the ſea? and laſtly, whether the flux and reflux of the tides, and other phænomena, may not be imputed to this attraction?

THAT the caſe, or covering, of the moon ſhould continue to grow, from what is called the new-moon to the full; and then decreaſe on the ſide where it increaſed before; is according to the laws of nature: which require, that ſalts, which promote freezing, ſhould be diſſolved by hot water, and let go as the water cools. "*Water heated only to* 32 *degrees diſſolves* "*the ſloweſt, and retains the leaſt quantity* "*of ſalt; whilſt that of* 212 *degrees, be-* "*ing the boiling-heat, ſuddenly diſſolves, and* "*copiouſly retains, the ſalt; and ſo in the* "*intermediate proportions. Thus if boiling* "*water has diſſolved as much ſalt as poſ-*

"*ſible,*

" *ſible, and then be ſet to cool, it every mo-*
" *ment lets fall ſome of the ſalt, till it*
" *comes to 32 degrees of heat; when it*
" *will have dropt a large quantity of ſolid*
" *ſalt; and if now expoſed to a freezing*
" *cold, it lets fall ſtill more, till in the*
" *ſharpeſt froſt of all, the ſalt will be al-*
" *moſt totally excluded, and as long as this*
" *degree of cold continues ſtick undiſſolved*
" *to the ice: but the firſt ſalt-water which*
" *in the ſharpeſt froſt expelled the ſalt that*
" *ſtill ſticks to the ice will much ſooner melt,*
" *by reaſon of the ſalt, than the water would*
" *do if pure. For as the ſalt mixed with*
" *the water prevents it freezing ſo ſoon as*
" *pure water; ſo in the ſame degree of*
" *heat the ſalt ſticking to the ice makes it*
" *thaw; whereas without this ſalt it would*
" *require many more degrees of heat before*
" *it turned to water.*" Boerh. p. 448, 449.

THE froſt is moſt ſevere on the part of the moon where the ice firſt appears, from the exceſs of ſalts on that quar-

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ter diſſolved and copiouſly retained in the freezing waters there, which have been intenſely heated by the fire of the ſun, and cooled by the fore-part of the exquiſitely cold moon ſufficiently for being frozen by the hinder-part. As the ſalts promote the congelation, ſo they alſo cauſe a thaw; whereby the right ſide of the moon, which had the moſt ſolid ice by means of the ſuperabundant ſalts ſticking to it, begins firſt to loſe it's ice by the means which firſt produced it: "*the ſalt ſticking to the ice makes* "*it thaw.*" The waters growing cooler onwards in the moon's path, fewer ſalts are diſſolved and retained in them. Here therefore the froſt ſenſibly abates; ſo that the naked eye ſees a darkneſs upon the increaſing ſurface, inſtead of that lively brightneſs which the new-moon aſſumed: the "*ſilver is become* "*droſs.*" The part on the left hand now meets the ſeverity of the freezing which commenced on the right ſide; as the

the moon gradually approaching to the ſun paſſes through waters increaſing in their degrees of heat, and therefore containing increaſing proportions of diſſolved ſalts; which harden the ice in ſo great a degree, that it is capable of enduring the ſun's fire when near it, as at the ſeaſon of the new-moon. To this intolerable heat it gives way however at the laſt, being intirely diſſipated by it. Such a kind of cryſtal cannot want lucidity: the diamond "*by means of water made a little* "*more than luke-warm might be brought to* "*ſhine in the dark.*" p. 121. n. Not that the moon is ever without brilliant company, being never forſaken by the ſtars, confeſſedly lucid.

WATER and all other bodies, in a ſpiritual ſtate, have their places naturally above the firmament, not having denſity to deſcend thither with the other leſs ſubtle particles which were congealed there at the Creation, and may be eſteemed as ſomething like an eſſence of the original chaos.

CHAP. XXVI.

On the Eclipſes of the Sun and Moon.

MANY perſons ſeem inclined to favour the *Copernican* ſyſtem merely from this conſideration, that eclipſes are predicted by the friends of that ſyſtem; which they imagine could not be foretold by them, if their notions were not founded upon juſt principles: whence it becomes neceſſary to remove this prejudice; that truth may ſtand as fair for admittance as errour.

IT may be premiſed, that the followers of *Ptolemy*, *Copernicus*, and *Tycho Brahe*, have conſtantly predicted eclipſes alike, notwithſtanding their diverſity of opinions, about the motions of the ſun and the earth: yet none of them have aſſigned the true cauſes of the eclipſes, although they were all enabled to point

out the time when an eclipſe muſt happen, if the time was near; but none of their rules have been deemed ſufficiently exact, to determine the preciſe time of eclipſes for ever, or for a good number of years to come. The cauſe of their inability to do this will eaſily appear.

EVERY one knows, that eclipſes depend upon particular poſitions of the ſun and moon: therefore if the motions of theſe planets, or of either of them, are not accurately determined by the rules of philoſophy; their poſitions at all times cannot be accurately known, and, by conſequence, the eclipſes cannot be accurately predicted. Now it is obſerveable, that aſtronomers have been continually finding fault with their predeceſſours, and have indeed proved, that their rules for determining the motions and poſitions of the planets have not correſponded with phænomena, for any conſiderable ſpace of time. About the middle of the thirteenth Century, *Alphonſus* king of *Spain*,

with the aſſiſtance of *Arabians*, *Moors*, *Egyptians*, *Hebrews*, and *Spaniards*, who could beſt adviſe in ſuch a caſe, conſtructed tables of aſtronomy; which, as may be eaſily gueſſed, were for a time in high eſteem. About the middle of the ſixteenth Century, *Copernicus* ſtood up, and found ſuch faults in the labours of *Alphonſus*, and others before him, that he rejected the *Ptolemaic* Syſtem, according to which their calculations had been formed. Almoſt preſently upon this, *Tycho Brahe* produced demonſtrations, that neither *Copernicus*, nor *Alphonſus*, could be truſted; both differing widely from phænomena; the conjunctions of *ſaturn* and *jupiter*, in the year 1563, in the ſign *cancer*, not anſwering to the account of either of the aſtronomers, but differing therefrom by the ſpace of ſome days. He diſcovered likewiſe, that the places of *mars* and *mercury*, aſſigned them by *Copernicus*, were very different from their true places in the heavens; inſomuch that he had ſometimes

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erred from the truth by the ſpace of three or four degrees. But *Tycho*, who could demonſtrate theſe errours of aſtronomers, is corrected alſo himſelf by others, and particularly by *Bulliald.* And the panegyriſt of the laſt-mentioned aſtronomer owns, that his eſteemed friend alſo miſſed the truth, in his endeavours to make a theory of the planetary motions: he ſays, it is clearer than the light, that *Bulliald*'s tables are not ſo finiſhed, as to anſwer the expectation conceived of them, differing from phænomena; whereof, he tells us there is proof, in the inſtance of *mars*, and the *eclipſes* of the *ſun* and *moon.* See *Wing*'s *Aſtron. Britan. pref.* After theſe great names, and many others which are omitted, Dr. *Halley* publiſhed his tables; by which "*he ſhewed, from his own* "*obſervations, that* former aſtronomers "had been defective, *in calculating the* "*motions of the heavenly bodies*; —— *and* "*that the obliquity of the ecliptic was no* "*leſs erroneous.*" Annual Regiſter, 1759.

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p. 284. This renowned aſtronomer has not left the world for the ſpace of an age; and yet his, once highly valued, tables are already diſregarded, according to the fate of others. Mr. *Witchell* in his repreſentation of the ſun's eclipſe for the year 1764, neglected Dr. *Halley*, and uſed Mſs. tables, as he informs us, of the late Mr. *Simpſon*. I take this gentleman to be the perſon, who has public encouragement for printing *new lunar tables*; concerning which I will venture to foretell, that they will fail of the expected end, as all others have done.

FROM what has been ſaid upon this article, it ſeems to be plain, that a theory of the moon's motion is not attainable by theſe principles of aſtronomy, on which their conſtruction has been attempted. Yet her phaſes, and revolutions, are well enough predicted, by the old rule in the *Kalendar*, for a ſhort ſpace. And this rule rectified, at times, as obſervations direct, determines the moon's age to a ſufficient degree

degree of accuracy. So that which ſeems to be the old method uſed in the prediction of eclipſes, will in like manner, I ſuppoſe, ſerve the purpoſe; as well as the golden numbers ſerve to point out the times of the new-moon.

THAT aſtronomers have miſtaken the cauſe, though not the ſeaſons, of eclipſes is demonſtrable by phænomena. In an eclipſe of the moon, that planet is, often nay almoſt, always viſible: "*Even when* "*the eclipſe of the moon is total, the moon* "*ſcarcely ever diſſappears intirely; ſhe almoſt* "*always* appears *more or leſs reddiſh.*" Regn. p. 274. The explanation of theſe phænomena, by the hypotheſis of refracted ſolar rays, has been attempted in vain; as was demonſtrated p. 41. It has alſo been ſhewn, that the hypotheſis of a terreſtrial ſhadow, in the open face of the moon, or, with the brightneſs of the ſtars, is a mere chimæra.

ANOTHER objection alſo deſerves notice: "*A very rare event, and which*

"*ſeems*

"*ſeems to overturn your principles, is, that*
"*the moon is eclipſed ſometimes in the ſun's*
"*preſence, when theſe two luminaries ap-*
"*pear near the horizon. Theſe horizontal*
"*eclipſes have been ſeen in divers ages.*
"*They had ſeen of them, at leaſt, in the*
"*time of* Pliny. *They ſaw another, the*
"*17th of* July, 1590; *at* Tubinge. *A*
"*third was ſeen, at* Taraſcon, *the 30th*
"*of* November, 1648; *And a fourth, in*
"*the iſland of* Gorgone, *the 16th of* June,
"1666." p. 281. The anſwer follows the objection: "*The ſun and moon are*
"*not in that caſe both actually above the*
"*horizon; but the refraction, which ele-*
"*vates objects, as we have ſaid, elevating*
"*theſe luminaries, at leaſt one of them,*
"*namely the ſun, makes them both to ap-*
"*pear at the ſame time above the horizon.*"
But the queſtion is not, Whether bodies actually below the horizon may be made to appear above it? The difficulty demanding a ſolution is this: How the moon can undergo an eclipſe, when ſhe

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is oppoſed as an open mark to the full force and brightneſs of the ſun's rays? This is the difficulty, which neither is nor can be ſolved, upon the received principles of philoſophy.

As it appears impoſſible, that lunar eclipſes can be accounted for upon the hypotheſes of aſtronomers; ſo it is alſo demonſtrable, that ſolar eclipſes are equally incapable of explication by the preſent theory; which will be evident by ſtating a plain matter of fact. Philoſophers ſay, an eclipſe of the ſun is owing to the moon's interpoſition, between the ſun and the earth; whereby the moon, which is ſuppoſed an opaque body, prevents the rays of the ſun from coming to the earth. But at the time of the laſt central eclipſe, which happened on the firſt of *April*, in the year 1764, *the ſun was certainly between the moon and us*; and therefore the moon could not darken the ſun by her interpoſition. For the ſun was then entred a little way in *aries*, in his

return from the ſouth towards us; and the moon was behind the ſun and overtook him, by her ſwifter motion, in her circuit from the ſouth, round by the eaſt, to the north. So ſhe paſſed on the ſouth-ſide of the ſun towards the eaſt, and came not about between the ſun and us, until the full-moon, which was on the ſixteenth day of the month. As the moon was behind the ſun, ſo the ſun was to be ſeen, very plainly, during the eclipſe; which could not be if the moon lay, an opaque body, in the way between us and the ſun. When the ſun is departing from us to warm the ſouthern parts of the globe; the moon, haſtening after him, is then upon every ſolar eclipſe between the ſun and us: at which times the ſame phænomena are natural in the ſouthern hemiſphere, which we ſaw in the eclipſe above-mentioned. For it is worthy our notice, that when a ſolar eclipſe happens, the moon cannot ſtand as an impediment to the ſight of the ſun with the inhabitants

bitants both of the north and ſouth [illegible] of the earth, at the ſame time. Therefore it is clearly demonſtrated, that eclipſes cannot be explained from thoſe principles which are contrary to Revelation. But let us ſee whether they are not eaſily explicable upon the principles laid down by *Moſes*, and proved in theſe papers to be true, agreeing with phænomena.

THE moon having been proved inveſted with a covering of ice, the ſame phænomena muſt attend the moon, when expoſed to the ſun's rays, as are obſerveable on the ſurface of a piece of ice, when expoſed to heat. Now we are aſſured, that the warmth of the hand, or of the air in the heat of ſummer, will draw a cloud about an icy ſurface: "*By* "*expoſing a piece of ice to the air in the* "*heat of ſummer, an aqueous vapour will* "*preſently appear as collected about it's ſur-* "*face; and if held near to the hand, a* "*vapour manifeſtly ariſes, betwixt the ice*

return from the ſouth towards us; and the moon was behind the ſun and overtook him, by her ſwifter motion, in her circuit from the ſouth, round by the eaſt, to the north. So ſhe paſſed on the ſouth-ſide of the ſun towards the eaſt, and came not about between the ſun and us, until the full-moon, which was on the ſixteenth day of the month. As the moon was behind the ſun, ſo the ſun was to be ſeen, very plainly, during the eclipſe; which could not be if the moon lay, an opaque body, in the way between us and the ſun. When the ſun is departing from us to warm the ſouthern parts of the globe; the moon, haſtening after him, is then upon every ſolar eclipſe between the ſun and us: at which times the ſame phænomena are natural in the ſouthern hemiſphere, which we ſaw in the eclipſe above-mentioned. For it is worthy our notice, that when a ſolar eclipſe happens, the moon cannot ſtand as an impediment to the ſight of the ſun with the inhabitants

bitants both of the north and ſouth parts of the earth, at the ſame time. Therefore it is clearly demonſtrated, that eclipſes cannot be explained from thoſe principles which are contrary to Revelation. But let us ſee whether they are not eaſily explicable upon the principles laid down by *Moſes*, and proved in theſe papers to be true, agreeing with phænomena.

THE moon having been proved inveſted with a covering of ice; the ſame phænomena muſt attend the moon, when expoſed to the ſun's rays, as are obſerveable on the ſurface of a piece of ice, when expoſed to heat. Now we are aſſured, that the warmth of the hand, or of the air in the heat of ſummer, will draw a cloud about an icy ſurface: "*By* "*expoſing a piece of ice to the air in the* "*heat of ſummer, an aqueous vapour will* "*preſently appear as collected about it's ſur-*"*face; and if held near to the hand, a* "*vapour manifeſtly ariſes, betwixt the ice*

"*and the ſurface of the ſkin.*" Boerh. p. 436, 437. And from hence we may conclude, that, at the time of a lunar eclipſe, when the ſun's rays iſſue directly againſt the moon's ſurface, although at a very great diſtance from it, they have power to excite this "*aqueous vapour*" or cloud; which, according to the different proportions of it's denſity, muſt affect the moon's face in a different manner; and may quite obſcure it, or leave it more or leſs perceptible; as we ſee by the different effects of different clouds paſſing over the planet. If therefore when the moon is at her full, ſhe be near enough to the ſun, that they may "*look "one another in the face*;" an eclipſe will neceſſarily happen: And this is the poſition which aſtronomers refer to; when they ſay, that the moon muſt be in her *nodes* or nearly ſo to make an eclipſe poſſible. At other times the ſun is too far below the horizon in reſpect of the moon, ſo that a ſtraight line cannot be drawn from

from the one to the other; the rotundity of the earth preventing it. Theſe planets may ſee one the other when we cannot ſee them both. No one will doubt, that if a perſon could ſtand on a very high tower, or rather on the ſummit of a very high mountain; he would have a view of celeſtial bodies, both in the eaſt and weſt, which diſappear to obſervers in a leſs elevated ſtation.

AT the time of the ſun's riſing, the cloud, cauſing the eclipſe, may be ſo ſuddenly and powerfully raiſed over the moon, as to cauſe her vaniſhing out of ſight, which has been ſometimes known to happen: "*But how comes it, that, du-*
"*ring the eclipſe, the moon ſometimes* diſ-
"appears *in a clear and ſerene heaven*;
"*before the time of ſetting, before the twi-*
"*light can make her diſappear?*" Reg. p. 277. The philoſopher is perplexed to find an anſwer, but we ſee the phænomenon is natural, according to the *Moſaic* Syſtem of nature.

So

So in a ſolar eclipſe: the moon, when on that ſide of the ſun which is turned from us, by a powerful attraction of the rays from the place of our dwelling, leaves us but a gloomy light, ſuch as we obſerved in the eclipſe before-mentioned. See more concerning the exhibition of contraſted views to the *antæci* of the earth in the firſt volume.

CHAP. XXVII.

On the appointment of the ſtars for Signs and Seaſons.

THE Light of the ſtars and alſo the deficiencies of their light have been examined. This examination has fully manifeſted, that the phænomena of the celeſtial bodies confirm their original appointment: "*Let them be for Lights in* "*the firmament of the heaven to divide the* "*day*

"*day from the night.*" They were to be of further uſe to mankind, by the command in the following words: "*And let "them be for Signs, and for Seaſons, and for "Days, and Years.*" The annual motion of the ſun, makes continued alterations in the riſing and ſetting of the *fixed* ſtars; which engaged, in ancient times, the attention of huſbandmen, and of thoſe that were to go down to the ſea in ſhips; who judged from hence, whether fair or tempeſtuous weather was coming on, and which were the proper *ſeaſons* for the different ſorts of huſbandry: *Virgil* and *Horace* ſpeak the ſenſe of the ancients upon both theſe points. We learn moreover from the former, that the ſun was thought to give the ſureſt ſigns; "*Solem quis dicere falſum Audeat?*" And a reliance on the alterations in the ſky by the ſun's rays continued amongſt the Jews, in the days of our LORD's appearance amongſt them; which may be read in the ſixteenth chapter of St. *Matthew.*

thew. From the aſpects of the ſmaller planets alſo, if we credit hiſtory, future alterations of weather have been foretold; of which there is a famous inſtance in the third volume of *Modern Hiſtory*, p. 299, 300: where we are told that, in the year of our LORD 1095, a deluge was predicted by the aſtrologers at *Bagh-dâd*. "*And in conformity to this predicti-*" *on, it happened, that moſt of the pilgrims* "*going to* Mecca, *who had pitched their* "*tents in the valley of* Al Manâkeh, *were* "*carried away by an irreſiſtible torrent, to-*" *gether with their beaſts of burden, bag-*" *gage, and every thing they brought with* "*them, and drowned; a few of them only eſ-*" *caping, who found means to retire to the* "*neighbouring mountains.*" I beg leave to admoniſh the Reader, that the firmament, as deſcribed in theſe papers, was to the *Aborigines* of the earth a natural teleſcope; which magnified objects far beyond the power of art, and gave them a large and pleaſing view of the ſmalleſt alterations

in

in the phaſes of the ſtarry ſphere. So theſe men had better opportunities of making obſervations, than thoſe which are the beſt amongſt their lateſt poſterity. Touching the uſes of the heavenly bodies as meaſures of time, it is needleſs to add any thing.

CHAP. XXVIII.

On the Origin of Mankind.

I HAVE not underſtood, that the Hiſtory of the Creation has been objected againſt, particularly, for the account given of the lower animal productions at the firſt; and therefore that part of the Hiſtory is left unexamined, as was done before with regard to the productions of trees, and vegetables. But ſince it has been objected, that *black* and *white men* could not be derived from one

pair of mortals, as all mankind are derived by *Moſes*, I have taken ſome pains, to make out a clear account of the generations from *Adam*, to the times beyond the firſt father of the *Ethiopic* race. The account is taken from a ſuppoſed atheiſt, whoſe firſt chapter, as cited from *Euſebius*, has been already examined, and we are now come to the ſecond.

"THE

"*Hiſtory of the principal line.*

"Generation I.

"*OF the wind* Colpias, *and his wife*
"Baau, *or* Baut *as* Bochart *reads*, *were*
"*begot two mortals, called* Protogonus *and*
"Æon: *And* Æon *found out the way of*
"*taking food from trees. The firſt genera-*
"*tion of mortals.*"

THE Biſhop ſaith, p. 207, "Scaliger
"*and* Grotius *own this* Baau *to be the*
"*ſame with* Bohu *in* Moſes." Now we have ſeen that *Bohu* means the chaos; which

which is therefore the wife here ſpoken of: and it is ſaid expreſsly, that the huſband was the *wind*. Wherefore the human race is derived, in this tradition, from the dark wind, or night, and chaos; from which principles this author, with *Moſes* and others, derived the Creation of the univerſe; as appeared in the beginning of this volume.

When our author ſays: "Æon *found* "*out the way of taking food from trees*," the diſguiſe cannot conceal the true hiſtory, that the woman firſt took the forbidden fruit from the tree of knowledge of good and evil.

"Gen. II.

"*Thoſe that were begotten by theſe were* "*called* Genus *and* Genea, *and dwelt in* "Phœnicia. *But when great droughts came,* "*they ſtretched their hands up to heaven* "*towards the ſun; for him,* he ſaith, *they* "*thought the only lord of heaven, calling* "*him* Beelſamin, *which in* Phœnician *is*

"*lord of heaven, in* Greek *is* Zeus."

BY *genus* and *genea* is moſt certainly meant the whole human race *male* and *female*; who are all derived from one pair, namely *Protogonus* and *Æon*, that is, *Adam* and *Eve*.

THE Bible informs us, that *Cain* was the firſt male born in the world, ſo his generations are firſt recorded in the fourth chapter of *Geneſis*: to whom the firſt inventions of arts are there aſcribed. Of which revelation the tradition before us is a diſguiſed account. *Moſes* ſays, "Cain "——*builded a city, and called the name* "*of the city, after the name of his ſon*, E-"noch." So *Sanchoniatho* ſettles *Genus* with *Genea* in *Phœnicia*; which was therefore the firſt city, called *Enoch* by *Moſes*. Nothing is ſaid, in the diſguiſed tradition, of *Cain*'s murder, nor of his exile, whilſt he lived in the *land of wandering*: "Nod, *nomen regionis in quam expulſus fu-*"*it* Cajin, *quaſi terra vagationis et exilii* "*dicta*." Buxt. But *Cain* muſt have lived long

long enough to have much iſſue before "*he dwelt in* Phœnicia:" for it is not to be conceived, that he would undertake to build a city alone; or that he would labour, in vain, to have a city without inhabitants.

"*But when great droughts came, they "ſtretched their hands up to heaven towards "the ſun; for him they thought the only lord "of heaven and earth.*" In proceſs of time, from the Creation, the ſun's power was viſible, both upon the congealed waters above, and upon the earth beneath; and the danger of a deluge ſeems now to be apprehended by theſe idolaters, if it was not revealed to them through *Adam* or otherwiſe. So, Sin having dominion over them, they worſhipped, living in ignorance and fear, the power from whence evil was dreaded.

"Gen. III.

"*Afterwards, from* Genus, *the ſon of* "Protogonus *and* Æon, *other mortal iſ-*

"*ſue*

" *ſue was begotten, whoſe names were Light,*
" *Fire, and Flame. Theſe found out the way*
" *of generating fire, by the rubbing of pieces*
" *of wood againſt each other; and taught*
" *men the uſe thereof.* "

THE uſes of fire are very conſiderable; ſo the men of the third generation were honoured, it ſeems, with names which might be memorials of their diſcoveries; although ſuch particulars were not within the deſign of the inſpired writer.

Gen. IV.

" *Theſe begat ſons of vaſt bulk and height,*
" *whoſe names were given to mountains on*
" *which they firſt ſeized. So from them were*
" *named mount* Caſſius, *and* Libanus, An-
" tilibanus, *and* Brathys. "

IT is not mentioned in the records in *Geneſis*, that *Irad*, who was in the fourth generation, exceeded thoſe that were before him in ſtature: yet *Moſes* may refer to this race of men, when he ſays

" *there*

" *there were giants in the earth in thoſe* " *days.*" Gen. vi. 4. They, perhaps, choſe the mountainous parts for their dwellings as the beſt ſecurity againſt the expected " *flood of waters.*" Being ſuperiour in ſtrength they could take the places which they liked beſt.

" Gen. V.

" *Of theſe*, ſaith he, *were begotten*, Mem-" rumus, *and* Hypſuranius, (or, as *Bochart* reads it, who is alſo called *Hypſuranius*,) " *but they were ſo named by their* " *mothers, the women of thoſe times, who,* " *without ſhame, lay with any man they* " *could light upon.*

" *Then*, ſaith he, Hypſuranius *inhabit-*" *ed* Tyre. *And he invented the making of* " *huts of reeds and ruſhes, and the paper* " *reeds. And he fell into enmity with his* " *brother* Uſous; *who firſt invented cover-*" *ing for his body out of the ſkins of wild* " *beaſts which he could catch.*

" *And when violent tempeſts of winds*

" *and*

" *and rains came, the boughs in* Tyre *be-*
" *ing rubbed againſt each other took fire,*
" *and burnt the wood there. And* Uſous
" *having taken a tree, and broke off it's*
" *boughs, firſt was ſo bold as to venture*
" *upon it into the ſea.*

" *And he conſecrated two* ſtelai, ruder
" ſtones *tranſlated* pillars, *to fire and wind,*
" (probably thoſe violent ones that had
" burnt the wood;) *and he bowed down*
" *to, or worſhipped them, and poured out to*
" *them the blood of ſuch wild beaſts as had*
" *been caught in hunting. But when theſe*
" *were dead, thoſe that remained conſecrated*
" *to them* rabdous, *ſtumps of wood, and*
" ſtelas, *worſhipping them; and kept anni-*
" *verſary feaſts unto them.* "

UPON the unchaſtity of this generation Biſhop *Cumberland* remarks, p. 241; " *It agrees with the intimation that* Mo-
" ſes *gives concerning the debauchery of thoſe*
" *ages, and the general corruption of the*
" *world which enſued upon it.* " The earth was afterwards " *filled with violence,* " and

we

we ſee that *Cain*'s hatred to his brother was followed in this generation.

THE expedition of *Uſous* was, probably, over the *Red Sea*, in ſearch of a ſettlement; as colonies may be judged to branch abroad about this time.

ANOTHER enemy was now dreaded, namely wind, beſides fire; which was alſo worſhipped for fear, as the ſun was ſaid to have been worſhipped. And they had alſo a nearer proſpect of that terrible tempeſt which was to deſtroy the world. For we have ſeen in the *Coſmogony*, that the tempeſt was preceded by winds and clouds; after which came on "*great* "*defluxions of the heavenly waters.*" See p. 217, 218.

"Gen. VI.

"*After many years from the generation of* "Hypſuranius, *(which is the fifth,) came* "Agreus, *and* Halieus; *the inventers of* "*the arts of hunting, and fiſhery: from whom* "*huntſmen and fiſhermen are named.*"

Moſes has not thought fit to inform us who were the inventers of thoſe arts.

"Gen. VII.

"*Of theſe were begotten two brothers,* "*the inventers of iron, and of the forging* "*thereof. One of theſe called* Chryſor, "*whom he affirms to be* Hephæſtus *or* "Vulcan, *exerciſed himſelf in words, and* "*charms, and divinations; and he found* "*out the hook, bait, and fiſhing-line, and* "*boats ſlightly made; and that he was the* "*firſt of all men that ſailed. Wherefore he* "*alſo was worſhipped after his death for* "*a god; and they called him* Diamichius: "*and ſome ſay, his brothers invented the* "*way of making walls of brick.*"

THE order of generations in the Bible is the following; *Adam, Cain, Enoch, Irad, Mehujael, Methuſael, Lamech.* Here *Lamech* is the ſeventh from *Adam* inclusive: of whom *Moſes* ſays nothing that may cauſe us to look upon him as the *Vulcan* of the pagans. Wherefore *Sanchoniatho's*

niatho's hiſtory mentions "*the inventers* "*of iron, and of the forging thereof,*" ſooner than was proper. For *Tubal-Cain*, in the next generation, was "*an inſtruc-* "*ter of every artificer in braſs and iron.*" *Lamech* had divers ſons by different wives, who were the authors of uſeful and ingenious diſcoveries. And this diverſity of mothers may have occaſioned a miſreckoning, in the hiſtory of generations which came into *Sanchoniatho*'s hands.

"Gen. VIII.

"*Afterwards, from this generation came* "*two brothers; one of which was called* "Technites, *that is, the artiſt; the other* "Geïnus Autochthon; *the home-born man* "*of the earth. Theſe found to mingle ſtub-* "*ble, or ſmall twigs, with the bricky earth,* "*and to dry them by the ſun; and ſo made* "*tiling.*"

THIS is the laſt generation in *Cain*'s line mentioned by *Moſes:* unleſs we divide *Lamech*'s offſpring, as they came

from two mothers. The *Phœnician* counts two generations more, which I ſhall inſert in this place, as not needing an explanation; and as they may be all taken together for *Lamech*'s family.

"Gen. IX.

" *By theſe were begotten others; of which* " *one was call'd* Agrus, *(Field,) the other* " Agrouerus, *or* Agrotes, *(Huſbandman,)* " *who had a much worſhipped ſtatue, and* " *a temple, carried about by one or more* " *yoke of oxen in* Phœnicia. *And in books* " *he is eminently called the greateſt of the* " *gods. Theſe found out how to make courts* " *about men's houſes, and fences, and caves,* " *or cellars. Huſbandmen, and ſuch as uſe* " *dogs in hunting derive from theſe. And* " *they are alſo called* Aletæ, *and* Titans.

"Gen. X.

" *From theſe were begotten* Amynus *and* " Magus; *who ſhewed men to conſtitute* " *villages, and flocks.* "

THE

THE two brothers in the eighth generation, one "*the home-born man of the earth,*" and the other "*the artiſt,*" agree well enough with the characters of two of *Lamech*'s children in this generation, under which the holy Scriptures repreſent them, in the fourth chapter of *Geneſis*. "*And* Lamech *took unto him two wives:* "*the name of the one was* Adah, *and* "*the name of the other* Zillah. *And* A- "dah *bare* Jabal: *he was the father of* "*ſuch as dwell in tents, and of ſuch as* "*have cattel.* —— *And* Zillah *ſhe alſo* "*bare* Tubal-Cain, *an inſtructer of every* "*artificer in braſs and iron.*" The children of theſe in the next generation, may have ſo far improved *Jabal*'s inventions, that they were reſpected as much or more than their anceſtor; and were on this account entitled to notice in *Sanchoniatho*'s hiſtory, though they deſerved not to be mentioned by *Moſes*; not being the "*fathers*" or firſt inventers of the arts by which they became famous to poſterity.

WHILST

WHILST we are conſidering the ſucceſſions and inventions in *Lamech*'s family, another circumſtance belonging to this family ſeems to ſollicite attention. The circumſtance which I mean is the murder ſpoken of by himſelf to his wives: "*And* Lamech *ſaid unto his wives* Adah "*and* Zillah, *Hear my voice ye wives of* "Lamech, *hearken unto my ſpeech: for I* "*have ſlain a man to my wounding, and* "*a young man to my hurt. If* Cain *ſhall* "*be avenged ſeven fold, truly* Lamech *ſe-* "*venty and ſeven fold.*" The likelieſt way to attain a ſenſe of the paſſage that may be truſted to, as highly probable at the leaſt, is, firſt of all to get a knowledge of facts, upon which the interpretation may reſt. A murder then was moſt certainly committed. For he ſays "*I have ſlain a man.*" The murder likewiſe concerned his wives; elſe why are they ſo emphatically addreſſed, "*Hear* "*my voice ye wives of* Lamech, *hearken* "*unto my ſpeech: for I have ſlain a man.*"

He

He himſelf appears alſo to have been wounded in the encounter: "*I have* "*ſlain a man to my wounding, and a young* "*man to my hurt.*" Laſtly he had a cauſe, which he thought warranted the ſlaughter; ſo that no man dared to ſlay him for that he had killed the young man, "*If* Cain *ſhall be avenged ſeven* "*fold*; *truly* Lamech *ſeventy and ſeven* "*fold.*" Hence if we can find a caſe, in which he might probably ſlay a man with all theſe circumſtances; that is very probably the caſe which we are enquiring after. But all theſe circumſtances concur in a caſe of adultery. And as we know, that the world was not better in the ſeventh or eighth generation than it was found in the fifth; when "*the women* "*without ſhame lay with any man they could* "*light upon*;" either or both of *Lamech*'s wives may have been taken in adultery with a young man: and the Gallant may have been ſlain by the angry Huſband, at the peril of his own life. Upon which

it

it ſeems natural for him to juſtify himſelf for what he had done, and to let the women know, that he feared no revenge from any of their lovers and confederates. We learn moreover from this incidental relation, that the laſt man ſpoken of in the line of *Cain* was a murderer, as *Cain* had been.

PERMIT me to conclude our Author's hiſtory of his firſt line with an obſervation from *Horace*, which agrees with *Lamech*'s circumſtances, as I have repreſented them.

" *Nam fuit ante* Helenam *cunnus teterrima belli*
" *Cauſa: ſed ignotis perierunt mortibus illi*
" *Quos venerem incertam rapientes more ferarum*
" *Viribus editior cædebat; ut in grege taurus.* "

Hor. b. 1. ſat. 3.

CHAP.

CHAP. XXIX.

The Examination of the Phœnician *Memoirs continued.*

THE Reader would hardly have been pleaſed with large comments on the traditions of the laſt chapter; which are leſs intereſting than thoſe that follow.

" *THE*

" *Hiſtory of the ſecond line.*

" Gen. XI.

" *FROM theſe men were begot* Mi-
" ſor, *and* Sydic; i. e. *Well-freed, and Juſt.*
" *Theſe found out the uſe of ſalt.* "

ALL the men of the ten generations were extinct, by GOD's " *bringing in the* " *flood upon the world of the ungodly:* " but this event, as has been remarked in the former pages, is ſilently overlook-

ed. So the hiſtory is carried on, from the tenth to the eleventh generation, as if the latter was lineally deſcended from the former. The next generation has it's proper place.

" Gen. XII.

" *From* Miſor *came* Taautus; *who found* " *out the writing of the firſt letters*; *whom* " *the* Egyptians *called* Thoor, *the* Alex- " andrians Thoyth, *and the* Greeks Her- " mes. *But from* Sydic *came the* Dioſcu- " ri, *or* Cabiri, *or* Corybantes, *or* Samo- " thraces. *Theſe, he ſaith, firſt invented* " *the building a* Ploion *or complete ſhip.* " Let the next generation follow uninterruptedly.

" Gen. XIII.

" *Of theſe others came*; *who found out* " *herbs, the cure of bitings, and charms.* "

THE *Phœnician* Hiſtorian, intending to point out the *Aborigines* of his country, was under a neceſſity of recurring to

Seth's

Seth's line; by which *Phœnicia* and all the world were peopled. And as *Ham* the ſon of *Noah* will be proved the *Phœnician* Head, his anceſtors are referred to, as has been uſual with writers. The reference is evident in the next paragraph.

" *In theſe men's age*, viz. *in the 9th* " *and 10th, there was one* Elioun; *which* " *imports in* Greek, Hypſiſtus, *the moſt* " *high*; *and his wife was called* Beruth; " *which dwelt about* Byblus: *from whom* " *was begotten one* Epigeus *or* Autoch- " thon, *whom they afterwards called* Ou- " ranus, i. e. *Heaven. So that from him,* " *that element which is over us, by rea-* " *ſon of it's excellent beauty, is called Hea-* " *ven: And he had a ſiſter of the ſame pa-* " *rents called* Ge, i. e. *Earth: and by rea-* " *ſon of her beauty the earth had her name* " *given to it.* "

We are got back to *Lamech*, who was the father of *Noah*, who was the father of *Ham*; whoſe genealogy and hiſtory is the object of our Author's me-

morial, which proceeds regularly forward. But I muſt intreat the Reader to ſtop a little, and enquire in this place concerning *Miſor* and *Sydic*, who are placed in the 11th generation.

Miſor is introduced only to ſhew the parentage of *Taautus*; who has a large ſhare in this memorial. He was ſettled, as will be manifeſted in our progreſs, in *Egypt*. Where *Mizraim* of the precedent generation was firſt ſettled, according to the *Moſaic* hiſtory: from whom *Egypt* has the name of *Mizraim* in the Bible; as is very well known. From the Bible we learn alſo, that *Mizraim* was the ſon of *Ham*; who is *Cronus* in *Sanchoniatho*'s language; and is therefore the ſame with *Miſor*. For *Miſor* can be no other than the ſon of *Cronus*; inaſmuch as there are but two roots in this ſecond line, and theſe will appear to be *Ham* and *Shem*: there are likewiſe but the branches of theſe roots *Miſor* and *Sydic*; and when I have proved *Sydic* to be in the line of

Shem,

Shem, it will clearly follow, that *Miſor* was of the other line, where the department of the firſt born was *Egypt*. Permit me to inſert here, that Biſhop *Cumberland* ſays, we are aſſured by *Sanchoniatho*, "*that* "Cronus *was the father of* Miſor:" but not ſeeing this aſſurance in his Lordſhip's extracts from *Euſebius*, and not having directly the power to conſult *Euſebius* himſelf; I thought it requiſite to give the proof, as above, that *Miſor* is the ſon of *Cronus*, and that he is the ſcriptural *Mizraim* the ſon of *Ham*.

THE Biſhop, and others beſides his Lordſhip, would have this *Sydic* to be the very *Shem* of *Moſes*: and they would perſuade us further, that *Melchiſedec* is the ſame perſon; and that the ſame *Shem*, or *Sydic*, or *Melchiſedec*, lived from the flood to the days of *Abraham*. But ſurely this opinion is built upon no good foundation. For with what propriety could an hiſtorian, who profeſſedly writes of the ſucceſſions of generations, confound the

generations

generations of father, and ſon? Which confuſion takes place, if *Sydic* be the father *Shem*, and matched with *Miſor* his brother's ſon: whereas *Shem* had children of the age of his brother's children; which branches anſwered one to the other in the generation ſucceeding the fathers.

THIS notion is alſo, if I am not utterly miſtaken, refuted by St. *Paul*'s reaſoning about *Melchiſedec*, in the ſeventh chapter of his epiſtle to the *Hebrews*: where he ſaith of *Melchiſedec*, that he is "*not genealogized*;" which cannot be ſaid of *Shem*, whoſe genealogy is deduced from *Adam*, and continued to CHRIST JESUS. Wherefore *Melchiſedec* muſt not be looked for in *Arphaxad*'s or the *Abrahamic* line; he is more properly derived from one of thoſe ſons of *Shem* whoſe deſcent is no otherwiſe recorded than in this manner: "*And* Shem *lived after he* "*begat* Arphaxad *five hundred years, and* "*begat ſons and daughters.*" Gen. xi. 11.

WHAT has been thus briefly ſet down concerning

concerning *Shem* and *Melchiſedec*, makes a plauſible proof that *Melchiſedec* was about the age of *Abraham*, rather than of *Shem*. They had both of them the ſame anceſtor *Shem*; and may therefore be more reaſonably reckoned equal in years, than to have ſuch a prodigious diſparity in their ages as has been injudiciouſly aſſigned them. At leaſt it is more than probable, that there were many generations between *Sydic* and *Melchiſedec*. We have good grounds to believe, that the *king* of *Zedec*, or righteouſneſs, was the title of every ſucceſſour of *Sydic*, in *Salem* or *Jeruſalem*. Which city plainly derives it's name *Zedec* from *Sydic* the *Juſt*; and it's name *Salem*, or the city of peace, from the peaceable diſpoſition of the ſame juſt perſon; and it's name *Jeruſalem*, or the inheritance of peace, from the ſame original; whence it deſcended, perhaps, as the inheritance of his poſterity, even to the time of *Joſhua*; when *Adonizedec*, which is a name of the ſame import with *Melchiſedec*, was the

the king of *Jeruſalem*, as is ſeen in his tenth chapter.

THE parentage of *Miſor* and *Sydic*, and the genealogies in general, which are now brought on this ſide of the flood as before-mentioned, may be, I apprehend, aſcertained by a ſtate and compariſon of *Cain*'s, and *Seth*'s lines in *Moſes*, with the generations in *Sanchoniatho*: as in the following manner:

	ADAM.	*PROTOGONUS.*
2. *Cain.*	*Seth.*	*Genus.*
3. *Enoch.*	*Enoſh.*	*Light.*
4. *Irad.*	*Cainan.*	*Giants.*
5. *Mehujael.*	*Mahalaleel.*	*Hypſuranius.*
6. *Methuſael.*	*Jared.*	*Agreus.*
7. *Lamech.*	*Enoch.*	*Vulcan.*
8. *Jabal.*	*Methuſalah.*	*Autochthon.*
9. *Tubal-Cain.*	*Lamech.*	*Titans.*
10. *Naamah.*	*Noah.*	*Amynus.*

IT will appear, at leaſt probable, by and by, that *Naamah* was the wife of *Noah*; wherefore ſhe may very well paſs for

for a cotemporary with the men of the 10th generation. *Tubal-Cain* may be deemed ſo much younger than *Jabal*, his brother by his father's ſecond wife, that he may be ranked after him. So when *Abraham* had children in his old age by *Keturah*, their ages better ſuited with the ages of grand-children than with the next generation to their father.

IT is alſo highly probable, that *Cain*'s eſpouſal, or cohabitation at leaſt with his wife, was after the marriage of *Seth*; and the generations in the latter line may exceed on that account. For *Cain* can hardly be ſuppoſed to have the comfort of a wife in his ſtate of exile; which he ſpeaks of as unconnected with comfort, and inſupportable. Nor is it at all likely that any one of his ſiſters deſired, or was permitted by *Adam*, to aſſociate with the murderer of a brother; whilſt he wore alſo a *mark* which GOD ſet upon him, that he might *live* for a time in torment, the token and remembrancer of

his guilt. After all, we need not ſuppoſe *Naamah* of the ſame age as *Noah*: She was probably much older than the patriarch.

LET us now return to the enquiry concerning *Noah*'s family as they appear in the memoirs. The name of his father was *Elioun* ſignifying higheſt, as *Sanchoniatho* acquaints us in his thirteenth generation. "*In theſe men's age*, viz. *in the* "*9th and* 10*th, there was one* Elioun, "*which imports in* Greek Hypſiſtus, *the* "*moſt high.*" This account carries us back to *Lamech*, the father of *Noah*, or *Ouranus*, as he is called in the hiſtory under examination.

Elioun, or "Hypſiſtus *the father of* "*theſe, dying in fight with wild beaſts,* "*was conſecrated; and his children offered* "*ſacrifices and libations to him.*

THE ſcripture, carrying on the hiſtory of the world in the briefeſt manner, informs us not of the manner of this man's death: but as he lived, by the ſcriptural account,

account, fewer years by far than his predeceſſours; it may be gueſſed from hence that his death was not natural. And I leave it to the Reader's conſideration, whether the wild beaſts, in fighting againſt which he died, according to the information which we have from the *Phœnician* Hiſtorian, may not be interpreted ſuch beaſts as St. *Paul* fought with at *Epheſus*; where he was perſecuted for his zeal towards GOD. I have often repeated it, that the *Phœnician* memoirs diſguiſe a fact, or circumſtance, which was unfavourable for the irreligion of *Ham*, and others of his caſt: and, agreeably to what is done in other parts of this ancient hiſtory, I am of opinion, that *Lamech* or *Elioun* or *Hypſiſtus* loſt his life in combating the infidelity of his times, rather than in fighting with the wild beaſts of the field.

" *But* Ouranus, *taking the kingdom of* " *his father, married his ſiſter* Ge, *and had* " *by her four ſons:* 1. Ilus, *who is called* " Cronus. 2. Betylus. 3. Dagon, *who is*

" Siton, *or the god of corn.* 4. Atlas. "

WE have henceforward no intimation concerning any man or woman, in the hiſtory, that lived in the world with this *Ouranus* and *Ge*; except thoſe that were deſcended from them. And this proves *Ouranus* and *Ge* to be *Noah* and his wife, from whom the poſt-diluvian world derive their pedigree. The wife of *Noah* or *Ouranus* is deſcribed by *Sanchoniatho* as very beautiful: " *by reaſon of her beau-* " *ty, the earth had her name given to it.* " She is moreover recorded as having the ſame parents with *Ouranus*: " *he had a* " *ſiſter of the ſame parents called* Ge. " By theſe lights we may poſſibly be guided to the ſcriptural name of *Noah*'s wife. For will not *Naamah* the daughter of *Lamech*, in *Cain*'s line, by *Zillah* his ſecond wife, anſwer the deſcription of *Sanchoniatho*'s *Ge*? The word *Naamah* is either deduced from " Naam, *amænum* " *jucundum eſſe*," " and has the ſame ſignification as *Naomi* in the book of *Ruth*;

or

or from " Naah, *pulchrum decorum amœ-*
" *num eſſe.* " Buxt. It is probable, ſhe received the name, importing her to be amiable, from her extraordinary beauty. *Naamah*'s father, in *Cain*'s line, had alſo the ſame name with *Noah*'s father in *Seth*'s line: for each of them was called *Lamech*. Now *Ouranus* being the ſon of *Lamech*, and *Ge* being the daughter of *Lamech*; there was room enough for an errour, for ſuppoſing them the children of the ſame parent. To this may be added, that *Naamah* is named as the ſiſter of *Tubal-Cain*, when other female names are omitted: the inſertion of her name cannot therefore have happened for no reaſon: when ſhe may be eſteemed almoſt as a ſecond *Eve*.

By this wife *Ouranus* or *Noah* had four ſons, whoſe names have been given from *Sanchoniatho*. But there were no more than three ſons of *Noah* at the time of the deluge; whence there was no need that *Moſes* ſhould mention another

ther ſon, who was wholly unintereſted in the hiſtory which he wrote: In the *Phœnician* records, nothing appears more than the name of *Betylus* the ſecond ſon of *Ouranus:* from whence it may be collected, that this ſecond ſon periſhed before the flood.

" *But by other wives* Ouranus *had much* " *iſſue*; *wherefore* Ge, *being grieved at it,* " *and jealous, reproached* Ouranus, *ſo as* " *they parted from each other. But* Ouranus, *tho' he parted from her, yet, by force* " *invading her, and lying with her, when* " *he liſted, went away again*; *and he alſo* " *attempted to kill the children he had by* " *her.* Ge *alſo often defended or avenged* " *her ſelf, gathering auxiliary powers unto* " *her.* "

THE memorials, paſſing to *Sanchoniatho* through *Ham*, are every where made injurious to *Noah*; the better to juſtify *Ham*'s iniquitous rebellion, and murder of his father, which is related in the hiſtory of the laſt line. Yet I do not

not imagine every circumſtance, which repreſents *Noah* as at variance with his wife, or family, to be maliciouſly invented by his rebellious ſon: he was likely to repreſent his father's behaviour in the worſt light; without departing intirely from the truth; and when he informs poſterity that *Noah* could not live harmoniouſly with his whole family; it would have been unaccountable if he had been repreſented in a ſtate of unity; when he was of the line in GOD's Service, and his wife was of *Cain*'s line, "*who was* "*of that wicked one, and ſlew his brother.*" 1. John iii. 12.

"*But when* Cronus *came to man's age,* "*uſing* Hermes Triſmegiſtus *as his Coun-* "*ſeller and Aſſiſtant, for he was his ſecre-* "*tary, he oppoſed his father* Ouranus, *a-* "*venging his mother. But* Cronus *had chil-* "*dren,* Perſephone, *and* Athena; *the for-* "*mer died a virgin, but by the counſel of* "*the latter,* Athena, *and of* Hermes, Cro- "nus *made of iron a ſcimeter and a ſpear.*

"*Then*

" *Then* Hermes *ſpeaking to the Aſſiſtants*
" *of* Cronus *with enchanting words, wrought*
" *in them a keen deſire to fight againſt* Ou-
" ranus, *in the behalf of* Ge. *And thus*
" Cronus *warring againſt* Ouranus *drove*
" *him out of his kingdom, and ſucceeded in*
" *the imperial power or office.* "

THE ninth chapter of *Geneſis* teaches us, that *Ham* had " *done* " ſomewhat to his father, whilſt he was oppreſſed with ſleep and wine; which ſo offended him, that he curſed the offender bitterly; when he " *awoke from his wine, and* " *knew what his younger ſon had done un-*
" *to him.* " After which, we do not any where read of a reconciliation, although this was juſt after the flood; beyond which period " Noah *lived three*
" *hundred and fifty years.* " This was time enough for *Ham*'s children to have grown up under him for his aſſiſtance: and ſo we read that *Hermes*, his grandſon, was old enough to be his Secretary and Counſeller, before *Ouranus* was deprived

deprived of his authority, by *Cronus* and his accomplices.

" *In the fight, was taken a well beloved* " *concubine of* Ouranus, *big with child,* " Cronus *gave her in marriage to* Dagon; " *and ſhe brought forth at his houſe what* " *ſhe had in her womb by* Ouranus, *and* " *called him* Demaroon. "

Ouranus was more than nine hundred years old when this concubine was taken from him, as will be proved by and by; and ſince his inclination continued at that time towards the younger ladies; it cannot be doubted that his wife, who is in all reaſon to be judged elder by much than her huſband, had cauſes of complaint againſt him, in his younger days.

" *After theſe things,* Cronus *builds a wall* " *round about his houſe, and founds* Byb- " lus, *the firſt city in* Phœnicia. *After-* " *wards* Cronus *ſuſpecting his own brother* " Atlas, *with the advice of* Hermes, *throw-* " *ing him into a deep hole of the earth,* " *there buried him.* "

Cronus being now ſupreme founded the ſeat of his empire in *Phœnicia*, where he fortified himſelf againſt his father and his brethren, from whom he had reaſon to apprehend danger, for the recovery of the dominion which he had uſurped. And ſuſpecting *Atlas* or *Shem* who adhered cloſely to his father, and to the GOD of his father, he deprived that innocent brother of his life.

" *At that time, the deſcendents of the* " Dioſcuri *having built ſome tumultuary* " *and other ſtrong ſhips went to ſea, and* " *being out over againſt mount* Caſſius, " *there conſecrated a temple.* "

THE family of the *Dioſcuri* came from *Shem*, as appeared in the former part of this chapter: hence as danger threatened them from the author of *Atlas*'s death, the head of their family, they forſook the land; and fled by ſea, " *to-* " *wards the ſouth unto the way that goeth* " *down from* Jeruſalem *unto* Gaza, *which* " *is deſert.* " They " *there conſecrated a* " *temple,* "

" *temple,* " I ſuppoſe, to their father's GOD; to whom alone they could flee for help, from the perſecution of their wicked enemy: the peaceable *Sydic* is not engaged in this tumult.

" *But the auxiliaries of* Ilus, *who is* " Cronus, *were called* Eloim, i. e. Ilus's " *men, or thoſe that were for* Cronus. *But* " Cronus *having a ſon called* Sadid, *diſ-* " *patched him with his own ſword, having* " *a ſuſpicion of him, and deprived his own* " *ſon of life with his own hand. So alſo* " *he cut off the head of his own daughter;* " *ſo as all the gods, the* Eloim, *were a-* " *mazed at the mind of* Cronus. "

A Tyrant regards not the lives of his neareſt relations, if they are ſuſpected to ſtand in the way of his ambition. Yet even his ſecretary and chief miniſter could not conceal from poſterity, that the very friends and confederates of the blood-thirſty uſurper ſtood " *amazed* " at his violent proceedings.

" *But in proceſs of time,* Ouranus *being*

" *in flight, or baniſhment, ſends his daugh-*
" *ter* Aſtarte, *with two other ſiſters* Rhea
" *and* Dione, *to cut off* Cronus *by deceit:*
" *whom* Cronus *taking made wives of*
" *theſe ſiſters.* Ouranus *underſtanding this,*
" *ſent* Eimarmene *and* Hora, Fate *and*
" Beauty, *with other auxiliaries, to war*
" *againſt him. But* Cronus *having gained*
" *the affections of theſe alſo, kept them with*
" *himſelf. Moreover the god* Ouranus *de-*
" *viſed* Bætulia, *contriving ſtones that mo-*
" *ved as having life.* "

IT may be inferred from hence, that *Ouranus*, in his extreme old age, truſted more to his own cunning devices than to the GOD of heaven, who had ſo long preſerved him from his ſon's machinations againſt him: after which he became a prey to his enemy, as he might have expected.

" *But* Cronus *begat on* Aſtarte *ſeven*
" *daughters called* Titanides, *or* Artemi-
" des; *and he begat on* Rhea *ſeven ſons,*
" *the youngeſt of which as ſoon as he was*
" *born*

" *born was conſecrated a god. Alſo by* Di-
" one *he had daughters; and by* Aſtarte
" *moreover two ſons,* Pothos, *and* Eros,
" i. e. Cupid, *and* Love. "

THIS paragraph and the following may paſs without a remark.

" *But* Dagon, *after he had found out*
" *bread-corn, and the plough, was called*
" Zeus Arotrius. " The following paragraph is the only one remaining in the hiſtory of the ſecond line.

" *To* Sydic *or the* Juſt, *one of the* Ti-
" tanides *bare* Aſclepius. Cronus *had al-*
" *ſo in* Peræa *three ſons*: 1. Cronus, *his*
" *father's name-ſake.* 2. Zeus Belus, 3.
" Apollo. "

THIS laſt quotation ſets before us another cauſe of *Sydic*'s living unmoleſted by *Ham*, although his grandfather and his own children fled for ſafety from him beſides his juſt mind, and quiet temper; for he is now diſcovered to be the ſon in law of *Ham*, and to have iſſue by a daughter of that Potentate: from whence

it

it may be judged, that *Sydic* wanted not the wiſdom of the ſerpent, whilſt he poſſeſſed the harmleſſneſs of the dove.

CHAP. XXX.

The Phœnician *Hiſtory concluded.*

IT appeared neceſſary to quote the ſeveral particulars of the tradition, for preſerving the connection; although it is not neceſſary to comment upon every article contained in theſe memoirs; the end of which is now nigh at hand.

" *THE*

" *Hiſtory of the laſt line.*

" *CONTEMPORARY with theſe*
" *were* Pontus, *and* Typhon, *and* Nereus
" *the father of* Pontus. *From* Pontus
" *came* Sidon, *(who by the exceeding ſweet-*
" *neſs of her voice, or ſinging, found out the*

hymns

" *hymns of odes, or praiſes,) and* Poſidon,
" *or* Neptune. "

THESE marine names point pretty plainly to the family of *Japheth*, according to it's diviſion in the tenth chapter of *Geneſis*: " *By theſe were the* iſles *of the* " *gentiles divided, in their lands, every one* " *after his tongue, after their families, in* " *their nations.* "

" *But to* Demaroon *was born* Meli-
" cartus, *who is* Hercules. "

Demaroon was born in the houſe of *Dagon*, as mentioned p. 307; and as *Demaroon*'s hiſtory is mixed, in this laſt line, with *Pontus*, and *Typhon*, and *Neptune* the deſcendent of *Pontus*; they muſt certainly be judged the offspring of the ſame parent *Dagon*: And he muſt needs be the *Japheth* of *Moſes*; as the names in this line ſuit the poſſeſſions of *Japheth*'s family deſcribed by *Moſes*. So *Cronus* is *Ham*, and *Dagon* is *Japheth*; therefore *Atlas* is *Shem*.

I am inclined to think, that *Taautus* deſignedly

deſignedly left the original of this family in obſcurity, the better to conceal the ſeeming deſign, in the Hiſtory of the ſecond line, already mentioned, of hiding the puniſhment of men's wickedneſs by the flood from the knowledge of poſterity. *Dagon* might have alſo the name *Nereus*; as *Cronus* was called *Ilus*.

"*Then again*, Ouranus *makes war a-*
"*gainſt* Pontus; *and, being ſeparated from*
"*him, joins with* Demaroon."

NOT *Ham* alone was diſobedient; there was open war between *Noah* and *Japheth*'s line. Yea the family of *Shem*, that branched eaſtward, degenerated, and, even to *Abraham*, idolatry ſubſiſted in this family; as *Joſhua* tells the people of *Iſrael* from the mouth of the LORD: "*Thus ſaith the* LORD GOD *of* Iſrael,
"*Your fathers dwelt on the other ſide of*
"*the flood in old time, even* Terah *the*
"*father of* Abraham, *and the father of*
"Nachor: *and they ſerved other gods.*"
Joſh. xxiv. 2. I believe "*the other ſide of*
"*the*

"*the flood*," would be better rendered *the other ſide of the river*, i. e. the other ſide of *Euphrates*: But the tranſlation in our Bibles ſhews plainly, that, in the opinion of the Tranſlators, the *Hebrew* word *Nahar* may be uſed to expreſs the greateſt collection of waters; which is a juſtification of what I have ſaid concerning the ſenſe and meaning of that word p. 205 and 206.

"DEMAROON *invades* Pontus, *but* "Pontus *puts him to flight*; *and* Dema-"roon *vows a ſacrifice for his eſcape.*" This requires no paraphraſe.

"*But in the thirty-ſecond year of his power* "*and reign*, Ilus, *who is* Cronus, *having laid* "*an ambuſcade for his father* Ouranus *in* "*a certain midland place*; *and having gotten* "*him into his hands*; *cuts off his privities*, "*near fountains and waters of the rivers*: "*and the place is ſhewed unto this day.*"

Noah loſt his life in the thirty-ſecond year after he had been deprived of his government; therefore he lived nine

hundred and eighteen years before this calamity befell him: for the years of his life were "*nine hundred and fifty.*" Therefore he was conſiderably more than nine hundred years old, when his concubine was taken from him, at the battle, which eſtabliſhed *Cronus* in power, and was the ruin of his father's affairs.

WHAT *Noah* ſuffered from *Ham* in the relation of *Moſes* was ſoon after the flood: but the wickedneſs perpetrated by *Ham* in the thirty-ſecond year of his reign was three hundred and fifty years after the flood: for ſo long did *Noah* ſurvive the deſolation by the deluge, as we read in *Gen.* ix. 28. Therefore the treſpaſs hinted by *Moſes*, not affecting the life of *Noah*, nor his health, as may be gueſſed from the length of his days after that event, was either an unpardonable act of preſumptuous inſolence, or the beginning of ſome dangerous miſchief, which he ſeems afraid to go through with, unleſs he could

could have been joined by his brothers.

"*Then our Hiſtorian after ſome things* "*interpreted goes on ſaying, But* Aſtarte "*called the greateſt, and* Demaroon *enti-* "*tul'd* Zeus, *and* Adodus *named king of* "*the gods, reigned over the country by* Cro- "nus's *conſent or authority. And* Aſtarte "*put on her head as the mark of her ſo-* "*vereignty a bull's head. But travelling a-* "*bout the world, ſhe found a ſtar falling* "*from the air or ſky:* which ſhe taking "up *conſecrated in the holy iſland* Tyre. "*And the* Phœnicians *ſay, that* Aſtarte *is* "*ſhe who is among the* Greeks *called* A- "phrodite."

In thoſe early ages, the ſtars were not grown to their modern philoſophical magnitudes; and their diſtances from the earth were reputed ſmall, according to their dimenſions: the ſtar fell "*from the* "air *or ſky.*" Their diameters have been in later days ſuppoſed "*above* 100,000 "*times greater than the diameter of our* "*earth.*" See Vol. I. p. 7, and 66.

The meaning of the myſtery ſeems to be that ſhe was deified.

"CRONUS *alſo, going about the world,* "*gave to his own daughter* Athena *the* "*kingdom of* Attica. *But when there was* "*a plague and mortality*; Cronus *made* "*his only ſon a whole burnt-offering to his* "*father* Ouranus."

VENGEANCE has purſued the ungodly in all ages of the world.

"*And* Cronus *was circumciſed in his* "*privities, and forced his auxiliaries to do* "*the ſame.*"

I have thought, that *Cronus* circumciſed his father; and that he intended to have diſabled him for conſtituting more partners with the three ſons that then only exiſted; if his two brothers would have concurred with the parricide: But as they reverenced their father like an angel of GOD, the attempt was neceſſarily laid aſide, 'till he became capable of acting without controul. And finding moreover his father's fruitfulneſs

continue

continue, he might very poſſibly impute this to his circumciſion; and on that account practiſe the ſame upon himſelf, and require the compliance of his auxiliaries; as a means whereby they might be multiplied, and be ſtronger than their enemies in futurity alſo, as they were for that time. Let the reſidue of the hiſtory go on without any remark to the end.

" *And not long after he conſecrated, af-*
" *ter his death, another ſon, which he had*
" *by* Rhea, *called* Muth; *ſo the* Phœni-
" cians *call* Death *or* Pluto.

" *After theſe things* Cronus *gives the*
" *city* Biblus *to the goddeſs* Baaltis, *which*
" *is* Dione; *and* Berytus *he gave to* Po-
" ſidon, *and to the* Cabiri, *and to huſ-*
" *bandmen, and to fiſhermen, who conſecra-*
" *ted the remains of* Pontus *in or unto*
" Berytus.

" *But before theſe things, the god* Ta-
" autus, *having formerly imitated or re-*
" *preſented* Ouranus, *made images of the*
" *countenances of the gods* Cronus *and*
" Dagon;

" Dagon, *and formed the ſacred charac-*
" *ters of the other elements. He contrived*
" *alſo for* Cronus, *the enſign of his royal*
" *power, four eyes, partly before and partly*
" *behind, two of them winking as in ſleep:*
" *and upon his ſhoulders four wings, two*
" *as flying, and two as let down to reſt.*
" *The emblem was, that* Cronus *when he*
" *ſlept was yet watching, and waking yet*
" *ſlept: And ſo for his wings, that even*
" *reſting he flew about, and flying yet reſt-*
" *ed. But the other gods had two wings*
" *each of them on their ſhoulders; to in-*
" *timate, that they flew about with or un-*
" *der him. He alſo had two wings on his*
" *head; one for the moſt governing part*
" *of the mind, one for the ſenſe.*

" *But* Cronus *coming into the ſouth coun-*
" *try, gave all* Egypt *to the god* Taautus,
" *that it ſhould be his kingdom. Theſe things,*
" *ſaith he, the* Cabiri, *the ſeven ſons of*
" Sydic, *and their eighth brother* Aſcle-
" pius, *firſt of all ſet down in memoirs*
" *as the god* Taautus *commanded them.*"

IT may be judged, they were "*ſet* "*down*" in *hieroglyphics*; which were anciently uſed by the *Egyptians*, and which appear to be the invention of *Taautus*, in the laſt paragraph ſave one. And theſe *hieroglyphics* may be ſuppoſed the *letters* which he is ſaid to have invented, in the beginning of the Hiſtory of the ſecond line.

CHAP. XXXI.

On the origin of the Ethiopians, *and the peopling of* America.

AS *Mizraim* is the Bible name of *Egypt*, ſo *Cuſh* is the Bible name of *Ethiopia*. The reaſon why *Egypt* is called in the *Hebrew* Bible by the name of *Mizraim*, and not *Egypt*, is evident enough: The name of the firſt prince that reigned in *Egypt* was continued to

that

that country, which his poſterity enjoyed after him, as appeared from the memoirs of *Phœnicia*. For the ſame reaſon it may be concluded ſafely, that *Cuſh* and his family ſettled in *Ethiopia*, which paſſes under the name of *Cuſh* in the *Hebrew*: as *Mizraim* and his family ſettled in *Egypt*, and cauſed that land to be called after the name of the founder, in the original; although the tranſlators have given their modern names in the place of their *Hebrew* appellations. But the difficulty remains. How had *Cuſh* the ſon of *Ham* a different complexion from *Mizraim* his brother? This could not happen in a natural way. I apprehend it was the effect of *Noah*'s curſe upon *Ham*, for his ſon's evil behaviour towards him. That GOD's diſpleaſure ſhould appear by ſome extraordinary token, upon the beginning of *Ham*'s diſobedience, ſeems neceſſary; that order might be preſerved, by ſubjection to parental authority at that time; when the world would have been

been preſerved to no purpoſe in one family, if that family ſhould be divided againſt it ſelf, before it had taken root for it's deſtined increaſe. And that GOD's diſpleaſure was ſhewn according to the prediction of the curſe, upon *Canaan* the youngeſt ſon of *Ham*, was, a good while after this, manifeſted by the fall of his poſterity before the people of *Iſrael*. But it was proper that ſome ſudden and ſtriking ſign ſhould be given of a diſtinction between obedience and diſobedience, when wickedneſs, ſo ſoon after the deſtruction of the world by the flood, lifted up a ſon's hand againſt his father, who was alſo the only father exiſting upon the earth. And what ſign could be more alarming to the rebel, than a black child born to him, which threatened him as one marked out for vengeance with his whole poſterity, from the firſt born to the youngeſt of his houſe, at leaſt unavoidable without repentance and reconciliation to his abuſed father. *Noah* had planted a vineyard,

and gathered the fruit of it, and was intoxicated by the wine, when his ſon took an advantage againſt him; whence it may be inferred that the time from the flood was ſufficient to give an expectation of the human increaſe. And there is no doubt that the wives of *Shem* and *Japheth* brought forth the likeneſs of their parents: but *Ham*'s wife, by reaſon of the curſe, brought forth *Cuſh*; the meaning of which name is to be inveſtigated. The word *Cuſh*, or, as *Buxtorf* writes it, *Chuſch* is manifeſtly derived from *chaſchah* to cover. And how could it happen but that the mother of ſuch a preternatural birth would cover or conceal ſuch a child from the ferocious ſpirit of his father; as ſhe alſo covered at the ſame time a diſgrace to her ſelf, in being the parent of a ſon wholly unlike her ſiſters children, who certainly produced parental likeneſſes. If ſhe may be judged inclined to murder the child, it could not have been in her power to

accompliſh her deſire. For *Noah*, aſſiſted by his two ſons, would ſurely have required a ſight of the birth, as it was an important matter at this time to add or diminiſh a child: when the world conſiſted but of eight grown perſons. The ſettlement of *Cuſh* in *Ethiopia*, at the extremity of the earth, may be called another proof of a conſent to hide or remove this prodigy from his relations, which, probably, was by univerſal conſent.

IT ſeems, that the mark of Divine diſpleaſure ſoftened the hard heart of *Ham*, for a time, and brought him to ſubmiſſion and obedience, and for his encouragement to expect a mitigation of the curſe denounced againſt his poſterity, upon his dutiful behaviour, *Mizraim* his ſecond ſon gives no reaſon for a ſuſpicion of his being unlike the other children which came from the loins of his grandfather.

NOR were all the poſterity of *Cuſh* involved in the curſe of rebellion and

miſchief; for *Nimrod*, one of theſe, eſcaped the puniſhment of his family; who is generally, or rather univerſally, acknowledged the founder of the *Aſſyrian* empire: Concerning which, with the Reader's permiſſion, I will offer a word or two, which may throw ſome light upon a part of hiſtory, where it is wanted.

When *Moſes* had ſet down the ſons of *Cuſh*, as he had before recorded the ſons of *Japheth*, he brings on *Nimrod* as by addition: "*and* Cuſh *begat* Nimrod:" deſcribing him as a very great prince, "*a* "*mighty hunter before the* Lord:" whoſe beginning of dominion was conſiderable, and the increaſe of it was proportionable; as may be ſeen in the tenth chapter of the book of *Geneſis*: "*And the* "*beginning of his kingdom was* Babel, *and* "Erech, *and* Accad, *and* Calneh, *in the* "*land of* Shinar. (*Out of that land went* "*forth* Aſhur.) *And* he *builded* Nineveh, "*and the city* Rehoboth, *and* Calah, *and* "Reſen, *between* Nineveh *and* Calah, *the*

"*ſame*

"*ſame is a great city.*" The parentheſis, together with the inſertion of the nominative caſe *he*, renders the paſſage as intelligible as any thing whatſoever. *Nimrod* expelled *Aſhur* the ſon of *Shem*, and poſſeſſed his land; which was nevertheleſs called *Aſſyria* afterwards from *Aſhur*, the firſt lord; as other places alſo derived their names.

I have avoided excurſions, but beg leave however to adverti ſe the Reader, that if he will be prevailed on to travel in the hiſtorical way of *Moſes*, he may obſerve under his direction various and delightful proſpects; which many, who have looked for them from different grounds, have either not ſeen at all, or at beſt diſadvantageouſly.

THAT the *Ethiopians* might paſs into *America* is eaſily proved, by the following occurrence, which is related in the *Whitehall Evening-Poſt*, No. 2984.

"Nantz, April 4. (1765.) *A ſhip com-*
"*manded by Mr.* Michon, *employed in buy-*
"*ing*

" *ing up negroes at* Buiſſo, *near* Senegal, " *was drove from her anchors on the* 21*ſt* " *of* November *laſt, and could not regain* " *that coaſt. Her ſituation was the more* " *unhappy, having very little rice and wa-* " *ter on board, and no ſea charts; and* " *the Captain was likewiſe very deſirous to* " *put on ſhore two negro brokers he had* " *on board, but this was impoſſible. Finding* " *he could not avoid going to ſea, he put* " *the two negro brokers, and two ſailors,* " *to guard* 37 *ſlaves that were on board,* " *and, the wind being favourable, ſteered for* " Martinico. *The five perſons who were at* " *liberty, were taken up night and day in* " *watching the ſlaves, and had nothing more* " *to ſubſiſt upon, during the whole voyage,* " *but a handful of rice, a glaſs of water,* " *and ſome ſpirituous liquors per day. After* " *ſailing nineteen days the wind dropt, and* " *it continued quite calm for four days. The* " *Captain imagining that he was then* 400 " *leagues from ſhore, began to be in deſpair* " *of reaching it, and had reſolved to throw*

" *his*

" *his negroes overboard, to ſave the reſt of*
" *the crew. In this cruel ſituation, the Cap-*
" *tain was taken ill with a violent fever,*
" *and they muſt have been all irrevocably loſt,*
" *if a favourable wind had not happily ſprung*
" *up, which brought them within ſight of*
" *land the next evening. It is aſtoniſhing,*
" *that in* 24 *days time, and during four of*
" *which it was a calm, they ſhould per-*
" *form a voyage of* 1200 *leagues; yet this*
" *was done, the Captain having landed at*
" Martinico *the* 15*th of* December. "

Mr. *Michon* was employed in the ſlave trade; which is of a very ancient date. As he thought himſelf in danger of being overpowered by the ſlaves in his ſhip; ſo we may ſuppoſe thouſands, in that employment, have been in circumſtances cauſing fearful apprehenſions, from the ſame quarter. And that apprehenſions from a few *Indians* are not without a foundation is plain, from what happened to *Pizarro*, a *Spaniſh* captain, of the *Aſia* " *a ſhip of* 66 *guns, and manned*

" *with*

"*with 500 hands.*" The quarter-deck of this ſhip *Orellana*, with only ten *Indians* beſides himſelf, poſſeſſed for the ſpace of two hours: and when their chief fell, "*his faithful companions all leaped into the* "*ſea, and periſhed.*" The account is taken from Lord *Anſon*'s voyages: and ſhews it to be very poſſible for ſuch reſolute barbarians to accompliſh, at times more favouring them than the ſeaſon now mentioned, ſchemes no way hazardous like this, but preſenting an aſſurance of ſucceſs, upon the attempt.

LET us ſuppoſe then a captain to have been overpowered by his ſlaves, and commanded by them to ſteer for ſome expected iſland, or uninhabited country, to be ſought far enough from the land of their captivity: Why might they not get to *Terra Firma*, which is much nearer than *Martinico*, as ſafely as Mr. *Michon* reached the iſland? From the various accidents at ſea, ſomething like to this may have often happened. And if

many

many ſhips and lives have periſhed in ſuch critical caſes, enough however may have eſcaped the dangers of the ſea to people *America*, as their own country was peopled. Lions, and other beaſts of *Africa*, which are carried by ſea to the differents parts of the world, may be ſuppoſed tranſported in the ſhips with the ſlaves.

SCHOLIUM.

THE arguments which are offered to the Public, in this Eſſay, are infallible proofs, that *Moſes* wrote the true Hiſtory of the Creation. Therefore the book of *Geneſis* deſerves the regard due to the firſt book of nature. Attention to the firſt part of what was written by this great prophet will excite a deſire, by GOD's grace, to ſtudy the further knowledge of the world, as revealed by our CREATOR, through *Moſes*, and his ſucceſſours, who wrote the Hiſtory of

the Firſt Teſtament. And thus we are gradually led on to ſeek the knowledge revealed in the Second Covenant. Moſt important truths are to be found in the New-Teſtament, reſpecting the ſtate of this preſent world, as well as that which is to come. And indeed the knowledge of all truth muſt be drawn from the Fountain of all wiſdom; as it flows for us under the direction of the SPIRIT; who has been proved the CREATOR and RULER of the world: To whom be Glory for ever. *Amen.*

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